

FOSTER WHEELER ENVIRONMENTAL CORPORATION

**FINAL
FOURTH ANNUAL REPORT
ON THE
JPL LONG-TERM QUARTERLY
GROUNDWATER MONITORING PROGRAM
NOVEMBER 1999 TO OCTOBER 2000**

Prepared for the:

**National Aeronautics and Space Administration
Jet Propulsion Laboratory
4800 Oak Grove Drive
Pasadena, California 91109**

March 2001



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LIST OF ACRONYMS AND CHEMICAL SYMBOLS

1,2-DCA	1,2-dichloroethane
As	arsenic
Ca ²⁺	calcium
CCl ₄	carbon tetrachloride
Cl ⁻	chloride
ClO ₄ ⁻	perchlorate
CO ₃ ²⁻	carbonate
COI	constituent of interest
Cr	chromium
Cr(VI)	hexavalent chromium
DTSC	Department of Toxic Substances Control
EPA	U.S. Environmental Protection Agency
Fe	total iron
FSAP	Field Sampling and Analysis Plan
Foster Wheeler	Foster Wheeler Environmental Corporation
HCO ₃ ⁻	bicarbonate
IAL	interim action level
JPL	Jet Propulsion Laboratory
K ⁺	potassium
MCL	maximum contaminant level
mg/L	milligrams per liter
Mg ²⁺	magnesium
MW	monitoring well
Na ⁺	sodium
NDMA	n-nitrosodimethylamine
NO ₃ ⁻	nitrate
NTU	nephelometric turbidity unit
Pb	lead
PCE	tetrachloroethene (perchloroethene)
QA/QC	quality assurance/quality control
RWQCB	Regional Water Quality Control Board
SO ₄ ²⁻	sulfate
TCE	trichloroethene
TDS	total dissolved solids
µg/L	micrograms per liter
VOC	volatile organic compound
Westbay	Westbay Instruments, Inc.

EXECUTIVE SUMMARY

This report summarizes the results from the fourth year of long-term quarterly groundwater monitoring for the National Aeronautics and Space Administration Jet Propulsion Laboratory (JPL). The Long-Term Quarterly Groundwater Monitoring Program is part of the Comprehensive Environmental Response, Compensation, and Liability Act Remedial Investigation/Feasibility Study and was initiated in August 1996 in response to a request from the U.S. Environmental Protection Agency (EPA). The purpose of this report is to compile and summarize the data from the fourth year of long-term groundwater monitoring, evaluate the effectiveness of the monitoring program, and to recommend adjustments to the monitoring program, if necessary. During this past year of quarterly monitoring, groundwater samples were collected from all 18 on-site JPL monitoring wells and all five off-site JPL monitoring wells, and analyzed for selected organic and inorganic analytes. Based on changes agreed to and described in the previous annual reports, various wells and screens were not sampled during every quarter this year. In addition, the analytical suite was limited for some wells, based on prior data. These changes are thoroughly discussed in the previous annual report [Foster Wheeler Environmental Corporation (Foster Wheeler), 1999a].

During the past year, carbon tetrachloride, trichloroethene, 1,2-dichloroethane, and tetrachloroethene were the only volatile organic compounds (VOCs) detected in groundwater samples at concentrations in excess of state and/or federal maximum contaminant levels (MCLs) for drinking water. One inorganic constituent, perchlorate (ClO_4^-) was detected in groundwater samples at concentrations exceeding the California Department of Health Services interim action level (IAL) of 18 micrograms/liter ($\mu\text{g/L}$). These compounds were generally detected at higher concentrations beneath the north-central portion of the site. Lower concentrations were generally detected to the south and east from the north-central portion of the site.

Arsenic (As) and lead (Pb), which in the past have rarely been detected, were not detected. During this past year, total chromium was detected in six wells, but in only one well (upgradient well MW-6) at a concentration above the state MCL, but still below the federal MCL. Hexavalent chromium, for which state and federal MCLs have not yet been established, was only detected in three on-site wells (MW-7, MW-13, and MW-16). N-nitrosodimethylamine (NDMA) and 1,4-dioxane analysis were performed during the third quarterly event on samples from selected wells and were not detected.

Overall, the groundwater quality data from the past year suggest the constituents of interest (COI) at JPL are well-defined and contaminant plumes are predominately stable.

Three different general water types were identified beneath JPL as suggested by differences in the concentrations of major anions and cations. In general, groundwater chemistry beneath JPL is well understood, and relatively little change in water type with time has been observed since the

monitoring program began. Consequently, for this year's program, major cations and anions analysis was only conducted during the third quarter. Water-elevation data collected during the year consistently showed that regional groundwater flow has been primarily towards the south and east, which is consistent with past years.

Based on the approved Long-Term Quarterly Monitoring Program Plan (Foster Wheeler, 1996a) and on results from the first three years of long-term monitoring at JPL, it was proposed during the past monitoring year that the program be revised to identify monitoring points that yield redundant data, and, thus, improve monitoring efficiency. Each sampling point was categorized relevant to each constituent of interest (e.g., plume well, downgradient well, or upgradient well). Individual monitoring point classification allowed for adjustments in the sampling program in which upgradient points (consistently showing non-detect) were sampled less frequently, thereby improving program efficiency. Approval was obtained from the regulatory agencies [EPA, California Department of Toxic Substances Control (DTSC), and California Regional Water Quality Control Board (RWQCB)], and the proposed changes were implemented for the final quarterly event of the past monitoring year, and were observed during this year's monitoring.

Additional changes were also implemented as agreed to by the regulatory agencies as follows: (1) analysis for Pb, As, 1,4-dioxane, and NDMA will now be performed annually due to infrequent detection and (2) analysis of general water chemistry parameters (major anion/cations) will also be conducted annually based on the consistency of prior results.

Also, it was agreed that the classification of each well and well screen (i.e., upgradient, downgradient, etc.) be based on a 2-year rolling calendar. Wells will be reclassified each quarter based on analytical results from the previous 8 quarters, thereby keeping the monitoring program current with aquifer and plume conditions.

In this report, wells were again reclassified, based on the above-described plan and agreements. Overall, the groundwater quality data obtained during the past year of quarterly sampling have adequately monitored the concentrations and extent of the JPL constituents of interest; therefore, it is recommended that the existing monitoring plan, with the changes discussed above instituted prior to the start of this past year of sampling, be continued.

1.0 INTRODUCTION

This report summarizes the results from the fourth full year (November 1999 through October 2000) of quarterly groundwater monitoring completed as part of the Long-Term Quarterly Groundwater Monitoring Program at the National Aeronautics and Space Administration Jet Propulsion Laboratory (JPL). The Long-Term Quarterly Groundwater Monitoring Program was initiated in response to a request from the U.S. Environmental Protection Agency (EPA) with the objective of monitoring hydrogeological conditions and the nature and extent of groundwater constituents beneath JPL. The purpose of this report is to compile and summarize the previous year's data, to evaluate the effectiveness of the monitoring program, and to recommend adjustments to the program, if necessary.

The monitoring program involves sampling of 23 groundwater monitoring wells (MWs) (located both on- and off-site) and quantification of various analytes in the samples. Additionally, water-level data are collected at each well and used to monitor groundwater gradient and flow direction.

Locations of the JPL monitoring wells are shown in Figure 1-1. Monitoring wells MW-3, MW-4, MW-11, MW-12, MW-14, and MW-17 through MW-24 are deep, multi-port wells, each containing five intervals screened with a Westbay Instruments, Inc. (Westbay) multi-port casing system. Monitoring wells MW-1, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-13, MW-15, and MW-16 are relatively shallow standpipe wells, each containing a single interval screened at the water table. Deep, multi-port wells MW-17, MW-18, MW-19, MW-20, and MW-21 are located off-site, while all other monitoring wells are located on site (MW-1, MW-3, and MW-9 are located just outside the eastern boundary of JPL but are considered "on-site" wells). Shallow well MW-2 has been replaced with deep multi-port well MW-14 as a JPL sampling point and was not sampled. A summary of the JPL monitoring well construction details is given in Table 1-1.

The four quarterly groundwater sampling events comprising the past monitoring year are designated as follows:

- First quarter: November/December 1999
- Second quarter: March/April 2000
- Third quarter: July/August 2000
- Fourth quarter: September/October 2000

Monitoring points (wells and well screens) sampled and analyses conducted during these four events are identified in Table 1-2. Based on results of previous long-term quarterly monitoring and guidelines included in the approved Long-Term Quarterly Monitoring Program Plan [Foster Wheeler Environmental Corporation (Foster Wheeler), 1996a], adjustments were made to the

Long-Term Monitoring Program during the fourth quarter of the third monitoring year (August, 1999). These changes were carried forth into the fourth year and are reflected in Table 1-2.

Several additional changes were approved by the regulatory agencies and implemented in this sampling year. The changes were as follows:

- As requested by the regulatory agencies, samples from selected JPL monitoring points were analyzed for NDMA during the third quarter only. NDMA has not been detected previously in any JPL groundwater samples.
- Samples from selected JPL monitoring points were analyzed for 1,4-dioxane during the third quarter only. Previously, 1,4-dioxane was only detected in samples from one JPL sampling point at very low concentrations.
- Samples from all JPL monitoring wells were collected and analyzed for lead, arsenic, and general water quality parameters (major anions and cations) during the third quarter only.

Groundwater sampling procedures and the quality assurance/quality control (QA/QC) program are summarized in Section 2.0 of this report. All sampling records, field instrument calibration forms, laboratory analytical reports, and chain-of-custody forms for each sampling event are included in the appendices of their respective quarterly reports (Foster Wheeler, 1999b; 1999c; 1999d; 1999e) and are not included in this summary report.

The analytical program focused on: (1) quantification of various constituents in the groundwater, and (2) determination of general water types based on general water quality analyses. Constituents of interest were monitored to verify and track the nature and extent of contamination in groundwater beneath JPL, and are discussed in Section 3.0. The water quality data were used to corroborate generalized groundwater types, which have been established throughout the Long-Term Monitoring Programming and are discussed in Section 4.0.

In addition to water quality analyses, hydraulic-head measurements were recorded monthly at each screen in the deep, multi-port wells. Water-level measurements, which had previously been measured daily in the on-site shallow wells were measured on a monthly basis, following regulatory agency approval. These data was used to monitor both horizontal and vertical groundwater flow and is presented in Section 5.0.

Section 6.0, Conclusions and Recommendations, presents conclusions regarding site conditions and recommendations to improve the monitoring program.

2.0 SAMPLING AND FIELD QUALITY ASSURANCE/ QUALITY CONTROL PROCEDURES

Two different procedures were used in the collection and handling of groundwater samples at JPL: (1) procedures designed for the shallow wells and (2) procedures designed for the deep, multi-port wells. These procedures are briefly outlined below.

2.1 SHALLOW MONITORING WELLS

Dedicated submersible pumps were used to sample the shallow monitoring wells. The pumps were decontaminated prior to installation (Ebasco, 1993a). Prior to sampling, the water in each well casing was purged (by pumping) to remove groundwater that may have been exposed to the atmosphere and, thus, was not representative of aquifer conditions.

Temperature, pH, electrical conductivity and turbidity of the water were monitored during purging. After these parameters had stabilized (when 2 successive measurements made approximately 3 minutes apart were within approximately 10 percent of each other) and the turbidity was less than 5 nephelometric turbidity units (NTUs), groundwater samples were collected directly from the discharge hose of the dedicated pump. A detailed description of the shallow well sampling procedure is included in the Field Sampling and Analysis Plan (FSAP) for Operable Unit 1 (on-site groundwater) (Ebasco, 1993a).

All sample bottles were filled completely (but not allowed to overflow), capped, labeled, and placed in a cooler with ice immediately after sample collection. Samples collected for VOCs had zero headspace.

2.2 DEEP MULTI-PORT MONITORING WELLS

Sampling of the deep, multi-port monitoring wells required specialized sampling equipment manufactured by Westbay. This equipment included a pressure profiling/sampling probe with a surface control unit. Copies of the detailed operations manuals for the Westbay pressure profiling/sampling probe are included in previous FSAPs (Ebasco, 1993a and 1994).

The Westbay sampling probe and sample bottles were decontaminated prior to sampling at each screened interval in each deep, multi-port well. Purging before sampling is not required in the deep multi-port monitoring wells because the groundwater sample is collected directly from the aquifer, and is not exposed to the atmosphere. However, at each screened interval, an initial sample of groundwater was collected in order to check pH, electrical conductivity, temperature, and turbidity, and to rinse the Westbay stainless-steel sample collection bottles with formation water. Samples for laboratory analysis were then collected and transferred to sample containers as described in Section 2.1. A final sample of groundwater was then collected and analyzed again for pH, electrical conductivity, temperature, and turbidity to ensure there was continuity of aquifer conditions during

sampling. A detailed description of the deep well sampling procedures is included in the FSAPs for Operable Unit 1 (on-site groundwater) and Operable Unit-3 (off-site groundwater) (Ebasco, 1993a and 1994).

2.3 QUALITY ASSURANCE/QUALITY CONTROL PROCEDURES

To verify the quality of the sampling procedures and analytical data, various field and laboratory QA/QC procedures were followed. These included collection of duplicate groundwater samples, equipment blanks, trip blanks, and a field blank during each quarterly sampling event. The laboratory QA/QC program (including matrix spikes, surrogate compounds, and method blanks) was conducted according to specific procedural and analytical method requirements. QA/QC program results for each quarter of monitoring are available in the quarterly groundwater monitoring reports for the past monitoring year (Foster Wheeler, 1999b; 1999c; 1999d; 1999e). QA/QC procedures are discussed in detail in the Quality Assurance Program Plan for completing the Remedial Investigation (Ebasco, 1993b) and associated addenda (Foster Wheeler, 1996b and 1998). Field QA/QC data (trip blanks, equipment blanks, and field blanks) have consistently shown that the sampling and sample handling procedures are not introducing contamination and, therefore, the data are acceptable for their intended use.

3.0 ANALYTICAL RESULTS - CONSTITUENTS OF INTEREST

The analytical results for the constituents of interest, which include VOCs, perchlorate (ClO_4^-), metals {Pb, As, total chromium (Cr), and hexavalent chromium [Cr(VI)]}, NDMA, and 1,4-dioxane, are summarized in this section. Refer to Section 1.0 and Table 1-2 for a list of analyses performed during each of the four sampling events which reflects prior changes made to the monitoring program. As noted in Section 1.0 and Table 1-2, the following prior changes regarding constituents of interest were incorporated into the analytical program, as agreed upon by the EPA, DTSC, and RWQCB:

- Pursuant to the approved monitoring plan (Foster Wheeler, 1996b), only selected wells, including those defined as “plume wells” and wells located “downgradient” of contaminant plumes, were sampled. Samples were analyzed for VOCs, Cr(VI), total Cr and ClO_4^- , depending upon their classification.
- Samples from selected wells were analyzed during the third quarterly event only for Pb, As, 1,4-dioxane, NDMA, and general water chemistry.

Results from VOCs and ClO_4^- analyses are compiled in Table 3-1, and results for metals analyses are presented in Table 3-2 (refer to Figure 1-1 for well locations). General discussions of the analytical results are provided in the following sections. In these discussions, where state and federal regulatory drinking water standards differ, the more stringent level is referenced.

3.1 VOLATILE ORGANIC COMPOUND RESULTS

VOC results are summarized in Table 3-1. The key findings are listed below, and a more complete description is provided in the following paragraphs. The VOC results indicated that:

- Only four VOCs were detected at concentrations exceeding state and/or federal maximum contaminant levels (MCLs), including carbon tetrachloride (CCl_4), trichloroethene (TCE), 1,2-dichloroethane (1,2-DCA), and tetrachloroethene (PCE).
- The highest concentrations of VOCs were identified on site in the shallow portion of the aquifer beneath the north-central portion of JPL.
- VOCs that have migrated off site (mainly CCl_4 and TCE) have been detected at lower concentrations in the off-site wells compared with those measured on site.
- The majority of off-site detections are generally located downgradient to the southeast of JPL in the deeper portions of the aquifer.
- Except where noted below, contaminant concentrations and locations of detections were generally consistent with past sampling years.

Carbon Tetrachloride

During the past year of monitoring, the highest concentrations of CCl_4 (up to 120 $\mu\text{g/L}$), have consistently been present in samples from six on-site wells located in the north central portion of the site (Table 3-1). Lower concentrations of CCl_4 (less than 5.0 $\mu\text{g/L}$) were detected in samples from four other on-site wells, and two off-site wells (Table 3-1). The lower concentrations are generally located in the downgradient portions of the aquifer to the southeast. CCl_4 concentrations have not exceeded 5.0 $\mu\text{g/L}$ in off-site wells. Because the method detection limit for CCl_4 is 0.5 $\mu\text{g/L}$, all CCl_4 detects exceed the state MCL of 0.5 $\mu\text{g/L}$.

In general, CCl_4 concentrations measured during the fourth year are consistent with those measured during the previous year, with the exception of MW-7, in which the concentration increased during the first two quarters. However, results from the third quarterly event suggest that the CCl_4 concentrations had dropped to a level more consistent with those measured in the previous year. In addition, the CCl_4 concentration in MW-3 Screen 3, which had increased over the previous year, appears to have somewhat stabilized based on this year's data.

Trichloroethene

During the past year of monitoring, concentrations of TCE ranging up to 24 $\mu\text{g/L}$ [in excess of the state and federal MCL (5.0 $\mu\text{g/L}$)] were detected in samples from six on-site wells, and two off-site wells (Table 3-1). The on-site wells containing TCE above the MCL are located in the north-central portion of the site. One of the off-site wells containing TCE above the MCL (MW-17) is located downgradient to the southeast of JPL, and the other off-site well (MW-21) is located cross-gradient to the southwest. Relatively low TCE concentrations (below the MCL) have also been found in samples from six additional on-site wells, and three off-site wells (Table 3-1). Low concentrations have also been detected in MW-14, which is upgradient to the west of JPL.

Overall, TCE concentrations appear to be relatively stable, or may be decreasing in some of the more highly impacted wells, such as MW-16, MW-17 Screen 3, and MW-23 Screen 1.

Tetrachloroethene

Concentrations of tetrachloroethene, also known as perchloroethene (PCE), exceeded the state and federal MCL (5 $\mu\text{g/L}$) in only one well (MW-21) during the past year of monitoring. This is an off-site well located crossgradient, to the southwest of JPL. PCE was detected at concentrations below the MCL in 10 on-site wells, and 4 off-site wells. The on-site wells in which PCE was detected (below the MCL) were generally located in the north-central portion of the site; however, two of these wells are located upgradient (MW-6 and MW-14). Off-site wells in which PCE was detected (MW-17, MW-18, and MW-19) are downgradient to the east and southeast of JPL.

It was noted in the previous Annual Report (Foster Wheeler, 1999a) that PCE, which had been detected in MW-10 in the past, had not been detected in this well for six quarters; however, low levels of PCE have reappeared in this well. In addition, the past year of data suggest that PCE levels in cross-gradient well MW-21 may be increasing, particularly in Screen 5.

1,2-Dichloroethane

1,2-DCA was only found at low concentrations just slightly exceeding the state MCL (0.5 µg/L) in samples from on-site wells MW-7, MW-13, and MW-16 (Table 3-1).

Other VOCs

Other VOCs have been detected in JPL groundwater samples, but these have either been at concentrations well below MCLs or the detections have been exceedingly rare or attributable to laboratory contamination (see Table 3-1).

3.2 PERCHLORATE RESULTS

During the past year of monitoring, groundwater samples from six on-site wells and four off-site wells contained ClO_4^- at concentrations below the California Department of Health Services interim action level (IAL) of 18 µg/L (Table 3-1). ClO_4^- was detected at concentrations exceeding the IAL (up to 1900 µg/L in MW-16) in samples from seven on-site wells and one off-site well (Table 3-1). ClO_4^- is generally present beneath the north-central and southeastern portions of the site, and off-site in the southeasterly direction. Higher concentrations were generally detected on-site in the shallower portion of the aquifer, and lower concentrations are generally noted off-site (downgradient) in deeper portions of the aquifer. One of the wells containing ClO_4^- (MW-21) is located crossgradient of JPL to the southwest, and two wells (MW-14 and MW-6) are located upgradient.

Perchlorate levels in MW-3 Screen 5 were measured as high as 140 µg/L in the previous year; however, ClO_4^- was not detected in samples from this screen during this year's monitoring. In addition, ClO_4^- levels detected in MW-18 Screen 4, which previous data had suggested were increasing, appear to have stabilized. Finally, ClO_4^- concentrations in MW-16 and MW-24 Screen 1 were higher than those measured during the previous year.

3.3 1,4-DIOXANE AND NDMA RESULTS

Pursuant to regulatory agency requests, groundwater samples from four selected wells (MW-7, MW-13, MW-16, and MW-24 Screen 1) were analyzed for 1,4-dioxane and NDMA during the third quarter of the past year of monitoring. The selected wells historically have contained the highest concentrations of groundwater contaminants at JPL. 1,4-dioxane and NDMA were not detected in any of the groundwater samples from these wells.

3.4 METALS RESULTS

Metals data are summarized in Table 3-2, and include the results for As, Pb, total Cr, and Cr(VI). As noted in Table 1-2, Pb and As analyses were only conducted during the third quarter of this monitoring year. Neither Pb nor As were detected in any samples during this event. These metals occur naturally in JPL soils (Foster Wheeler, 1999e) and their sporadic presence historically at low levels in JPL groundwater is believed to have resulted from natural processes.

Total Cr was occasionally detected below its MCL [0.5 milligrams per liter (mg/L)] in five on-site wells, generally located in the central portion of the site (Table 3-2). In addition, total Cr was only detected above the state MCL, but below the federal MCL, in upgradient well MW-6 during the second and third events of the monitoring year. The total Cr concentrations are generally consistent with those measured in previous events.

Hexavalent Cr was detected sporadically during the past monitoring year at low concentrations (less than 0.031 mg/L) in three on-site wells (Table 3-2). Cr(VI) was not detected in downgradient off-site wells. State and federal MCLs for Cr(VI) have not yet been established.

3.5 SUMMARY OF RESULTS

Results described above are summarized as follows.

- The VOCs detected and their concentrations are generally consistent with those observed in previous years. On-site shallow wells contained higher concentrations of VOCs than off-site JPL wells.
- ClO_4^- concentrations were also generally consistent with those observed in previous years. However, a decrease in the ClO_4^- concentration in well MW-3 Screen 5 and stabilization of the concentration MW-18 Screen 4 are contrary to last years annual assessment that suggested that further migration of ClO_4^- had occurred.
- As and Pb, which are believed to be naturally occurring and sporadically detected at low concentrations in JPL groundwater, were not detected during this monitoring year.
- 1,4-Dioxane and NDMA were not detected in select wells sampled.

4.0 GENERAL WATER CHEMISTRY

As part of the monitoring program, groundwater samples in the past have been submitted quarterly for analysis of general groundwater parameters. Based on the relative consistency of the general chemistry throughout the Long-Term Monitoring Program, sampling for these parameters is now conducted on an annual basis. Quarterly analysis was discontinued in the fourth quarter of the prior year and was conducted only during the third quarter of this year as agreed to by the EPA, DTSC, and RWQCB (Table 1-2). Analysis of general groundwater parameters included major cations and anions [sodium (Na^+), potassium (K^+), calcium (Ca^{2+}), magnesium (Mg^{2+}), sulfate (SO_4^{2-}), nitrate (NO_3^-), chloride (Cl^-), carbonate (CO_3^{2-}), bicarbonate (HCO_3^-)], total iron (Fe), total dissolved solids (TDS), and pH. These analyses were performed in order to further understand the natural chemistry of the groundwater beneath JPL and for potential use in interpreting groundwater flow patterns. General groundwater chemistry data for this year are presented in the respective quarterly report (Foster Wheeler, 1999d) and are not shown here. Several QA/QC checks were performed on the data to show that the data were acceptable for their intended use (Foster Wheeler, 1999d).

The water chemistry results were summarized using Stiff diagrams, which allowed for a general empirical classification of each sample. This analysis has suggested that the majority of groundwater sampled at JPL can be classified as one of three general water types, based on the predominant cation and anion(s). These types include:

- Type 1 Calcium-bicarbonate groundwater: Ca^{2+} as the dominant cation and HCO_3^- as the dominant anion
- Type 2 Sodium-bicarbonate groundwater: Na^+ as the dominant cation and HCO_3^- as the dominant anion
- Type 3 Calcium-bicarbonate/chloride/sulfate groundwater: Ca^{2+} as the dominant cation and HCO_3^- as the dominant anion, but with relatively elevated Cl^- and SO_4^{2-} concentrations

Compiled in Table 4-1 are the groundwater classification results. In several cases, the data suggested possible blending of water types. It should be noted that there is some subjectivity inherent in this type of analysis. We can, therefore, make the assumption that the apparent blends may be classified as either water type represented.

These results are consistent with results from previous years and indicate that water types are well-characterized and relatively consistent throughout the site.

5.0 WATER-LEVEL MEASUREMENTS

In the past, water levels in the on-site shallow monitoring wells were measured daily, using dedicated pressure transducers and data logging equipment that stored water-level information electronically. In addition, water levels in shallow wells were measured manually each month using a water-level tape/indicator. Beginning with the final quarter of the previous year, the frequency of water-level measurements taken in the shallow wells was reduced to monthly, in agreement with the regulatory agencies. For this monitoring year, water levels were, therefore, only measured monthly using a water-level tape indicator. Water levels in the deep, multi-port wells were also monitored manually each month using a pressure-transducer probe manufactured by Westbay specifically for the unique casing in these wells. Details of water level measurement procedures have previously been described (Ebasco, 1993a; 1994).

Monthly water-level elevations collected manually for both deep and shallow wells are summarized in Table 5-1. Hydrographs generated from the monthly water-level data collected from the deep multi-port wells are presented in Figures 5-1 through 5-13. Data shown on Figures 5-1 through 5-13 indicate that there is an enhanced downward flow of groundwater when the nearby municipal production wells are pumping. This is best illustrated by comparing Figures 5-1 and 5-8 with Figures 5-11 and 5-12. Wells depicted in Figures 5-1 and 5-8 (MW-3 and MW-19, respectively) are located in close proximity to operating City of Pasadena production wells and exhibit a pronounced draw-down in the lower screens. Conversely, wells depicted in Figures 5-11 and 5-12 (MW-22 and MW-23, respectively) are located further from the production wells, and drawdown is not as significant. Hydrographs generated from the monthly water-level data collected from the shallow wells are presented in Figures 5-14 and 5-15.

As part of the quarterly monitoring program, water levels taken immediately prior to, and immediately after, each sampling event were contoured to evaluate groundwater flow directions during sampling. These water-elevation contour maps are included in each associated monitoring report and indicate that flow has been primarily to the south and east across JPL during the past year. In addition, the maps show the continuous presence of a significant groundwater mound located at the mouth of the Arroyo Seco. This typical scenario is illustrated in Figure 5-16, which depicts typical groundwater elevation contours and flow directions that are representative of those observed.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are based upon interpretation of analytical data and field measurements collected during the past year of the JPL Long-Term Quarterly Monitoring Program:

- Groundwater contaminants and contaminant plumes are well-defined and relatively stable. Data from the previous monitoring year suggested that ClO_4^- , had undergone some minor additional migration. This year's results indicate that the ClO_4^- plume size appears to be stable. It is noted, however, that ClO_4^- levels in several on-site wells have increased.
- The groundwater flow is generally to the south and east across JPL. A downward vertical component is also present, due largely to pumping by the nearby City of Pasadena municipal production wells.
- General water chemistry analyses indicate a relatively stable groundwater chemistry beneath JPL.
- The Long-Term Groundwater Monitoring Program is effectively addressing the objective of monitoring hydrogeological conditions and the nature and distribution of groundwater constituents beneath JPL.

Based on historical results from the long-term quarterly monitoring program, guidelines included in the Long-Term Quarterly Monitoring Program Plan (Foster Wheeler, 1996b), and regulatory agency requests, adjustments were made prior to beginning this past year of monitoring with the goal of optimizing sampling and monitoring efficiency. These changes primarily consisted of classifying JPL monitoring points (wells and well screens) based on their proximity to the various groundwater contamination plumes (VOC and ClO_4^-), or wells in which total Cr and Cr (VI) were detected. This was carried out using the classification categories described in the Long-Term Monitoring Program Plan (Foster Wheeler, 1996b) as summarized below:

1. *Plume Well*: Wells or well screens where constituents have been detected above detection limits. If a constituent was detected anytime during the long-term monitoring program, it was classified as a plume well.
2. *Downgradient Well*: Wells or well screens that lie near the "edge" of plumes where constituents have not been detected at any time during the monitoring program, but may appear in the future. For example, multi-port well screens located immediately above and below a screen with a detect are considered "downgradient" well screens.
3. *Upgradient Well*: Wells or well screens that are not likely to be in the path of contaminant plumes. Upgradient wells primarily provide background information.

To make groundwater monitoring more efficient, it was proposed and agreed upon with the regulatory agencies that reclassification of all monitoring points will be conducted quarterly with respect to each constituent based on a 2-year rolling calendar. In addition, it was agreed plume wells and well screens and downgradient wells and well screens would be sampled quarterly; and upgradient wells and well screens would be sampled semiannually. These changes were implemented during this year of sampling. Monitoring points were thus reclassified each quarter using analytical results from the previous 8 quarters. This resulted in decreasing the sampling frequency of some monitoring points consistently showing non-detectable concentrations of constituents of interest, and increasing the sampling frequency of some wells that had previously been non-detect but are currently indicating detectable contaminant concentrations.

Based on the latest set of groundwater data, the new classification of wells based on the above-described parameters is presented in Table 6-1. It is noted that there is some subjectivity in this approach, and that some determinations as to whether a non-detect well was upgradient or downgradient were conservatively made based on site knowledge, changing groundwater flow directions, and professional judgment.

Overall, the groundwater quality data obtained during the past year of quarterly sampling have adequately monitored the concentrations and extent of the JPL constituents of interest; therefore, it is recommended that the existing monitoring plan, with the changes discussed above instituted prior to the start of this past year of sampling, be continued.

7.0 REFERENCES

- Ebasco. 1993a. Field Sampling and Analysis Plan for Performing a Remedial Investigation at Operable Unit 1: On-Site Groundwater. National Aeronautics and Space Administration-Jet Propulsion Laboratory. December.
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- Foster Wheeler Environmental Corporation. 1996a. Part A Addendum to the Work Plan for Performing a Remedial Investigation/Feasibility Study, Draft-Final. National Aeronautics and Space Administration-Jet Propulsion Laboratory. September 1996.
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- _____. 1999a. Third Annual Report on the Groundwater Monitoring Program, September 1998 to August 1999. National Aeronautics and Space Administration – Jet Propulsion Laboratory. May.
- _____. 1999b. Quarterly Groundwater Monitoring Results, November-December, 1999. National Aeronautics and Space Administration-Jet Propulsion Laboratory. March.
- _____. 1999c. Quarterly Groundwater Monitoring Results, March-April, 2000. National Aeronautics and Space Administration-Jet Propulsion Laboratory. July.
- _____. 1999d. Quarterly Groundwater Monitoring Results, July-August, 2000. National Aeronautics and Space Administration-Jet Propulsion Laboratory. December.
- _____. 1999e. Quarterly Groundwater Monitoring Results, September-October 2000. National Aeronautics and Space Administration-Jet Propulsion Laboratory.

TABLES

TABLE 1-1**SUMMARY OF CONSTRUCTION DETAILS FOR JPL GROUNDWATER MONITORING WELLS**

Well Number	Well Type	Year Installed	Drilling Method	Depth to Bottom of Casing (feet below ground surface)	Depth of Screened Interval (feet below ground surface)	Elevation Top 4-inch Casing (feet above mean sea level)	Elevation of Screened Interval (feet above mean sea level) ⁽¹⁾	Multi-Port Well Screen Number	Comments
MW-1	Shallow Standpipe	1989	Mud Rotary	120	70-110	1116.7	1006.70-1046.70	-	Installed during upgradient water quality study for U.S. Army Corps of Engineers (see Section 1.3.3.8)
MW-2	Shallow Standpipe	1989	Mud Rotary	177	127-167	1168.85	1001.85-1041.85	-	Installed during upgradient water quality study for U.S. Army Corps of Engineers (see Section 1.3.3.8). Well subsequently replaced by deep well MW-14.
MW-3	Deep Multi-Port	1990	Mud Rotary	700	170-180 250-260 344-354 555-565 650-660	1099.82 839.82-849.82 745.82-755.82 534.82-544.82 433.82-443.82	919.82-929.82 839.82-849.82 745.82-755.82 534.82-544.82 433.82-443.82	1 2 3 4 5	Installed during JPL Expanded Site Inspection (see Section 1.3.3.9).
MW-4	Deep Multi-Port	1990	Mud Rotary	559	147-157 237-247 318-328 389-399 509-519	1082.72 835.72-845.72 754.72-764.72 683.72-693.72 563.72-573.72	925.72-935.72 835.72-845.72 754.72-764.72 683.72-693.72 563.72-573.72	1 2 3 4 5	Installed during JPL Expanded Site Inspection (see Section 1.3.3.9).
MW-5	Shallow Standpipe	1990	Air Percussion	140	85-135	1071.6	936.60-986.60	-	Installed during JPL Expanded Site Inspection (see Section 1.3.3.9).
MW-6	Shallow Standpipe	1990	Air Percussion	245	195-245	1188.52	943.52-993.52	-	Installed during JPL Expanded Site Inspection (see Section 1.3.3.9).
MW-7	Shallow Standpipe	1990	Air Percussion	275	225-275	1212.88	937.88-987.88	-	Installed during JPL Expanded Site Inspection (see Section 1.3.3.9).
MW-8	Shallow Standpipe	1992	Air Percussion	205	155-205	1139.53	934.53-984.53	-	Installed during JPL pre-RI investigation (see Section 1.3.3.14).
MW-9	Shallow Standpipe	1992	Air Percussion	68	18-68	1106.02	1038.02-1088.02	-	Installed during JPL pre-RI investigation (see Section 1.3.3.14).
MW-10	Shallow Standpipe	1992	Air Percussion	155	105-155	1087.71	932.71-982.71	-	Installed during JPL pre-RI investigation (see Section 1.3.3.14).

Notes: (1) All screens, except in wells MW-1 and MW-2, are 4-inch diameter, wire wrap stainless steel with 0.010-inch slot size. Screens in wells MW-1 and MW-2 are 4-inch diameter, schedule 40 PVC with 0.020-inch slot size.

TABLE 1-1**SUMMARY OF CONSTRUCTION DETAILS FOR JPL GROUNDWATER MONITORING WELLS**

Well Number	Well Type	Year Installed	Drilling Method	Depth to Bottom of Casing (feet below ground surface)	Depth of Screened Interval (feet below ground surface)	Elevation Top 4-inch Casing (feet above mean sea level)	Elevation of Screened Interval (feet above mean sea level) ⁽¹⁾	Multi-Port Well Screen Number	Comments
MW-11	Deep Multi-Port	1992	Mud Rotary	680	140-150 250-260 420-430 515-525 630-640	1139.35	989.35-999.35 879.35-889.35 709.35-719.35 614.35-624.35 499.35-509.35	1 2 3 4 5	Installed during JPL pre-RI investigation (see Section 1.3.3.14).
MW-12	Deep Multi-Port	1994	Mud Rotary	596	135-145 240-250 315-325 430-440 546-556	1102.14	957.14-967.14 852.14-862.14 777.14-787.14 662.14-672.14 546.14-556.14	1 2 3 4 5	Installed during OU-1 RI pursuant to RI/FS Work Plan (Ebasco, 1993a).
MW-13	Shallow Standpipe	1994	Air Rotary	235	180-230	1183.47	953.47-1003.47	-	Installed during OU-1 RI pursuant to RI/FS Work Plan (Ebasco, 1993a).
MW-14	Deep Multi-Port	1994	Mud Rotary	588	205-215 275-285 380-390 453-463 538-548	1173.42	958.42-968.42 888.42-898.42 783.42-793.42 710.42-720.42 625.42-635.42	1 2 3 4 5	Installed during OU-1 RI pursuant to RI/FS Work Plan (Ebasco, 1993a).
MW-15	Shallow Standpipe	1994	Air Percussion	74	19-69	1120.66	1051.66-1101.66	-	Installed during OU-1 RI pursuant to RI/FS Work Plan (Ebasco, 1993a).
MW-16	Shallow Standpipe	1994	Air Percussion	285	230-280	1236.27	956.27-1006.27	-	Installed during OU-1 RI pursuant to RI/FS Work Plan (Ebasco, 1993a).
MW-17	Deep Multi-Port	1995	Mud Rotary	774	246-256 366-376 466-476 578-588 723-733	1190.99	934.99-944.99 814.99-824.99 714.99-724.99 602.99-612.99 457.99-467.99	1 2 3 4 5	Installed during OU-3 RI pursuant to RI/FS Work Plan (Ebasco, 1993a).

Notes: (1) All screens, except in wells MW-1 and MW-2, are 4-inch diameter, wire wrap stainless steel with 0.010-inch slot size. Screens in wells MW-1 and MW-2 are 4-inch diameter, schedule 40 PVC with 0.020-inch slot size.

TABLE 1-1**SUMMARY OF CONSTRUCTION DETAILS FOR JPL GROUNDWATER MONITORING WELLS**

Well Number	Well Type	Year Installed	Drilling Method	Depth to Bottom of Casing (feet below ground surface)	Depth of Screened Interval (feet below ground surface)	Elevation Top 4-inch Casing (feet above mean sea level)	Elevation of Screened Interval (feet above mean sea level) ⁽¹⁾	Multi-Port Well Screen Number	Comments
MW-18	Deep Multi-Port	1995	Mud Rotary	732	266-276 326-336 421-431 561-571 681-691	1225.34	949.34-959.34 889.34-899.34 794.34-804.34 654.34-664.34 534.34-544.34	1 2 3 4 5	Installed during OU-3 RI pursuant to RI/FS Work Plan (Ebasco, 1993a).
MW-19	Deep Multi-Port	1995	Mud Rotary	543	240-250 310-320 390-400 442-452 492-502	1143.2	893.20-903.20 823.20-833.20 743.20-753.20 691.20-701.20 641.20-651.20	1 2 3 4 5	Installed during OU-3 RI pursuant to RI/FS Work Plan (Ebasco, 1993a).
MW-20	Deep Multi-Port	1995	Mud Rotary	948	228-238 388-398 558-568 698-708 898-908	1164.89	926.89-936.89 766.89-776.89 596.89-606.89 456.89-466.89 256.89-266.89	1 2 3 4 5	Installed during OU-3 RI pursuant to RI/FS Work Plan (Ebasco, 1993a).
MW-21	Deep Multi-Port	1995	Mud Rotary	416	86-96 156-166 236-246 306-316 366-376	1058.99	962.99-972.99 892.99-902.99 812.99-822.99 742.99-752.99 682.99-692.99	1 2 3 4 5	Installed during OU-3 RI pursuant to RI/FS Work Plan (Ebasco, 1993a).
MW-22	Deep Multi-Port	1997	Mud Rotary	634	239-249 324-334 384-394 464-474 584-594	1176.81	927.81-937.81 842.81-852.81 782.81-792.81 702.81-712.81 582.81-592.81	1 2 3 4 5	Installed during OU-1 RI to fill data gaps pursuant to Addenda to RI/FS Work Plan (Foster Wheeler 1996a, 1996b and JPL 1996).
MW-23	Deep Multi-Port	1997	Mud Rotary	590	170-180 250-260 315-325 440-450 540-550	1108.34	928.34-938.34 843.34-858.34 783.34-793.34 658.34-668.34 558.34-568.34	1 2 3 4 5	Installed during OU-1 RI to fill data gaps pursuant to Addenda to RI/FS Work Plan (Foster Wheeler 1996a, 1996b and JPL 1996).

Notes: (1) All screens, except in wells MW-1 and MW-2, are 4-inch diameter, wire wrap stainless steel with 0.010-inch slot size. Screens in wells MW-1 and MW-2 are 4-inch diameter, schedule 40 PVC with 0.020-inch slot size.

TABLE 1-1**SUMMARY OF CONSTRUCTION DETAILS FOR JPL GROUNDWATER MONITORING WELLS**

Well Number	Well Type	Year Installed	Drilling Method	Depth to Bottom of Casing (feet below ground surface)	Depth of Screened Interval (feet below ground surface)	Elevation Top 4-inch Casing (feet above mean sea level)	Elevation of Screened Interval (feet above mean sea level) ⁽¹⁾	Multi-Port Well Screen Number	Comments
MW-24	Deep Multi-Port	1997	Mud Rotary	725	275-285 370-380 430-440 550-560 657-685	1200.91	915.91-925.91 820.91-830.91 760.91-770.91 640.91-650.91 515.91-525.91	1 2 3 4 5	Installed during OU-1 RI to fill data gaps pursuant to Addenda to RI/FS Work Plan (Foster Wheeler 1996a, 1996b and JPL 1996).

Notes: (1) All screens, except in wells MW-1 and MW-2, are 4-inch diameter, wire wrap stainless steel with 0.010-inch slot size. Screens in wells MW-1 and MW-2 are 4-inch diameter, schedule 40 PVC with 0.020-inch slot size.

TABLE 1-2

**SUMMARY OF ANALYSES DURING THE FOURTH YEAR OF
LONG-TERM QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY**

Analyses	Analytical Method	Sampling Event			
		November/ December 1999	March/ April 2000	July/ August 2000	September/ October 2000
Constituents of Concern					
Volatile Organic Compounds (VOCs)	524.2	All wells	(1)	All wells	(1)
Perchlorate (ClO_4^-)	300.0 Mod	All wells	(2)	All wells	(2)
Chromium (Cr)	200.8	All wells	(3)	All wells	(3)
Hexavalent Chromium [Cr(VI)]	7196	All wells	(3)	All wells	(3)
Lead (Pb)	200.8	--	--	All wells	--
Arsenic (As)	200.9	--	--	All wells	--
NDMA	1625C	--	--	(4)	--
1,4-Dioxane	8270	--	--	(4)	--
General Water Quality Parameters					
Major Anions and Cations [Na, K, Ca, Mg, Fe, SO_4 , NO_3 , Cl, $(\text{CO}_3+\text{HCO}_3)$]	Various	--	--	All wells	--
Total Dissolved Solids (TDS)	2540-C	--	--	All wells	--
pH	4500-H	--	--	All wells	--

Notes:

--: Not analyzed.

- (1) All except the following wells and screens: MW-1, MW-3 (Screens 1 and 5), MW-4 (Screens 4 and 5), MW-9, MW-11 (Screen 5), MW-15, MW-17 (Screen 1), MW-18 (Screen 1), MW-22 (Screens 4 and 5), MW-23 (Screens 4 and 5), MW-24 (Screens 4 and 5).
- (2) All except the following wells and screens: MW-1, MW-3 (Screen 1), MW-4 (Screens 4 and 5), MW-9, MW-11 (Screen 5), MW-15, MW-17 (Screen 1), MW-18 (Screen 1), MW-22 (Screen 5), MW-24 (Screens 4 and 5).
- (3) All except the following wells and screens: MW-1, MW-3 (Screens 1 and 5), MW-9, MW-11 (Screens 4 and 5), MW-12 (Screens 4 and 5), MW-14 (Screen 5), MW-15, MW-17 (Screens 1 and 5), MW-18 (Screens 1 and 5), MW-19, MW-21, MW-22 (Screens 3, 4 and 5), MW-23 (Screen 5), MW-24 (Screen 5).
- (4) Wells MW-7, MW-13, MW-16, and MW-24 (Screen 1) only.

TABLE 3-1

**SUMMARY OF VOLATILE ORGANIC COMPOUNDS AND PERCHLORATE DETECTED
DURING THE FIRST 4 YEARS OF LONG-TERM QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY**

(concentrations in $\mu\text{g/L}$)

Values above state or Federal MCLs, or above/equal to action levels, are bold and shaded
(see final page of Table for MCLs and notes)

Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
MW-1	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	--	--	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	--	1.9 Acetone	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	--	1.9 Acetone	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	1.3 m,p-Xylenes	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
MW-3	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
		Screen 1	--	--	--	--	--	--	--	1.2	--	(1)
	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	8.3	0.7(B) Naphthalene	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	--	2.6 Carbon Disulfide	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	--	--	--
		Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)

TABLE 3-1
**SUMMARY OF VOLATILE ORGANIC COMPOUNDS AND PERCHLORATE DETECTED
DURING THE FIRST 4 YEARS OF LONG-TERM QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY**

(concentrations in µg/L)

Values above state or Federal MCLs, or above/equal to action levels, are bold and shaded
(see final page of Table for MCLs and notes)

Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 2	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	5.5	--	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	4.8	1.9(B) Naphthalene	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	4.4	8.0 Carbon Disulfide	(1)
		Jun/Jul 1997	--	--	--	--	--	--	1.0	1.2	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	0.8	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	--	--	--	--	--	--	--	--	--	--
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	--	--	--	--	--	--	--	--	--	--
Screen 3	1 st	Aug/Sep 1996	0.6	0.8	--	--	--	--	--	1.6	--	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	0.7	--	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	0.8	--	(1)
		Jun/Jul 1997	1.2	0.8	0.6	--	--	--	2.8	1.8	--	21
	2 nd	Sep/Oct 1997	1.2	0.5	--	--	--	--	--	1.6	--	13
		Jan/Feb 1998	1.2	--	--	--	--	--	--	2.7	--	6.5
		Apr/May 1998	3.6	0.9	--	--	--	--	--	3.9	--	6.2
		Jul/Aug 1998	2.4	0.6	--	--	--	--	--	3.6	--	10
	3 rd	Oct/Nov 1998	5.8	0.7	--	--	--	--	--	21	2.7 Carbon Disulfide	--
		Feb/Mar 1999	4.5	1.3	--	--	--	--	0.9	42	--	--
		May/Jun 1999	42	1.3	--	--	--	--	1.0	26(EB)	--	8.9
		Aug 1999	15	1.0	--	--	--	--	0.8	37	--	--
	4 th	Nov/Dec 1999	26	1.3	--	--	--	--	0.9	43(EB)	--	5.2
		Mar/Apr 2000	42	1.9	--	--	--	--	1.1	32(EB)	--	19.4
		Jul/Aug 2000	8.6	1.4	--	--	--	--	0.7	37(EB)	--	--
		Sep/Oct 2000	22	1.3	--	--	--	--	--	25	--	25

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DURING THE FIRST 4 YEARS OF LONG-TERM QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY

(concentrations in µg/L)

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 (see final page of Table for MCLs and notes)

Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 4	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	--	--	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	--	1.2 Acetone	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	--	1.0 Hexane	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	4.7 Carbon Disulfide ⁽³⁾	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	--	--	--	--	--	--	--	--	--	--
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	--	--	--	--	--	--	--	--	4.1 Carbonyl Sulfide	--
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	--	--	--	--	--	--	--	--	--	--
Screen 5	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	2.1 Dichloromethane	(1)	
		Oct/Nov 1996	--	--	--	--	--	--	--	2.1 Acetone	(1)	
		Feb/Mar 1997	--	--	--	--	--	--	--	1.2 Carbon Disulfide		
		Jun/Jul 1997	--	--	--	--	--	--	--	1.5 Carbon Disulfide	(1)	
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	2.7 Sulfur Dioxide		
		Jan/Feb 1998	--	--	--	--	--	--	--	1.3 Unknown (RT=2.51)		
		Apr/May 1998	--	--	--	--	--	--	--	4.5 Carbon Disulfide		
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	91
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	
		May/Jun 1999	--	--	--	--	--	--	--	--	--	75
		Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	140
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	0.2 Carbonyl Sulfide	--	
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
		Jul/Aug 2000	--	--	--	--	--	--	--	0.7 Carbonyl Sulfide	--	
		Sep/Oct 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)

TABLE 3-1
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Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
MW-4												
Screen 1	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	--	2.9(B) Acetone	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	--	--	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	--	--	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	7.4
		Jan/Feb 1998	--	--	--	--	--	--	--	--	--	9.6
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	3.4 Dichloromethane ⁽⁴⁾	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	0.8(B)	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	--	--	--	--	--	--	--	--	--	--
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	--	--	--	--	--	--	--	--	--	--
Screen 2	1 st	Aug/Sep 1996	5.5	19	--	--	0.9	0.7	--	6.7	3.2(B) Acetone	(1)
		Oct/Nov 1996	5.3	15	--	--	0.6	0.8	--	5.4	1.8 Acetone	(1)
		Feb/Mar 1997	7.9	19	--	--	0.8	0.8	--	7.8	--	(1)
		Jun/Jul 1997	4.0	5.7	--	--	0.5	--	--	3.4	--	51
	2 nd	Sep/Oct 1997	4.0	8.0	0.5	0.6	--	0.5	--	3.5	--	34
		Jan/Feb 1998	1.9	2.7	0.6	--	--	--	--	1.8	--	30
		Apr/May 1998	2.8	4.3	0.7	0.5	--	--	--	3.1	--	41
		Jul/Aug 1998	1.5	3.0	0.8	0.5	--	--	--	2.0	--	29
	3 rd	Oct/Nov 1998	0.9	2.4	0.7	--	--	--	--	1.6	--	25
		Feb/Mar 1999	1.2	4.1	0.6	0.5 ⁽⁵⁾	--	--	--	2.5	--	38
		May/Jun 1999	2.0	6.4	0.7	--	--	--	--	3.7(EB)	--	56
		Aug 1999	1.9	5.5	0.5	--	--	--	--	3.3	--	69
	4 th	Nov/Dec 1999	2.3	6.2	0.7	--	--	--	--	3.1(EB)	--	42
		Mar/Apr 2000	1.4	3.9	0.7	--	--	--	--	1.7(EB)	--	33
		Jul/Aug 2000	1.7	3.8	1.0	0.6	--	--	--	1.9(EB)	--	32
		Sep/Oct 2000	1.2	2.6	1.2	0.7	--	--	--	1.4(EB)	--	23

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Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 3	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	--	3.0(B) Acetone	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	--	1.5 Acetone	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	--	--	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	1.0 Dichloromethane ⁽⁴⁾	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	--	--	--	--	--	--	--	--	--	--
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	0.6 Unknown (RT=4.79)	--
		Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	--	--	--	--	--	--	--	--	--	--
Screen 4	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	--	3.9(B) Acetone	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	--	1.6 Acetone	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	--	--	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)

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Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 5	1 st	Oct/Nov 1996	--	--	--	--	--	--	--	--	1.9 Acetone	(1)
		Aug/Sep 1996	--	--	--	--	--	--	--	--	--	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	--	--	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	7.4 Hexane	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	0.6 ⁽⁴⁾	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
MW-5	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	--	--	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	--	--	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	--	--	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	--	4.2
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	6.5 Dichloromethane ⁽⁴⁾	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	--	--	--	--	--	--	--	--	--	--
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	--	--	--	--	--	--	--	--	--	--

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 (concentrations in µg/L)
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Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
MW-6	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	1.3(TB)	--	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	--	--	(1)
		Feb/Mar 1997	--	--	--	0.8	--	--	--	--	--	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	--	--	5.5
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	2.0	1.0	--	--	--	--	--	--
		Apr/May 1998	--	0.7	3.2	1.1	--	--	--	0.6	--	--
		Jul/Aug 1998	--	0.6	2.5	0.8	--	--	--	--	7.6 Dichloromethane ⁽⁴⁾	4.2
	3 rd	Oct/Nov 1998	--	--	0.7	--	--	--	--	--	--	--
		Feb/Mar 1999	--	0.8	3.8	1.0	--	--	--	0.6	--	--
		May/Jun 1999	--	--	1.5	--	--	--	--	--	--	--
		Aug 1999	--	--	0.5	--	--	--	--	--	--	4.0
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	--	--	3.0	0.8	--	--	--	--	--	4.8
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	4.1
		Sep/Oct 2000	--	--	--	--	--	--	--	0.5	0.7 Freon 11	4.7
MW-7	1 st	Aug/Sep 1996	90	39	0.8	--	1.2	1.1	7.2	13(TB)	--	(1)
		Oct/Nov 1996	170	27	1.3	--	0.8	2.3	7.7	14	4.3(B) 1,1-Difluoroethane 2.8(B) Acetone	(1)
		Feb/Mar 1997	45	27	0.6	--	0.8	0.9	5.1	9.9	--	(1)
		Jun/Jul 1997	39	23	0.7	--	0.8	1.0	4.1	11	10 Unknown	285
	2 nd	Sep/Oct 1997	93	22	1.1	--	0.9	1.3	4.7	13	--	550
		Jan/Feb 1998	150	24	3.7	--	0.8	2.1	6.4	13	--	720
		Apr/May 1998	31	13	0.5	--	--	--	3.1	6.1	--	130
		Jul/Aug 1998	43	19	0.8	--	0.6	0.9	3.4	9.0	1.0 Dichloromethane ⁽⁴⁾	190
	3 rd	Oct/Nov 1998	51	18	0.9	--	0.7	1.1	3.0	9.8	3.4 Carbon Disulfide	210
		Feb/Mar 1999	49	17	0.6	--	--	0.9	2.0	7.2	--	150
		May/Jun 1999	42	14	--	--	--	--	2.2	5.7(FB)	--	120
		Aug 1999	40	16	0.5	--	--	0.8	1.9	7.8(FB)	--	210
	4 th	Nov/Dec 1999	120	19.7	3.0	--	0.7	2.2	2.4	10.8(FB)	--	460
		Mar/Apr 2000	110	18	2.7	--	0.5	2.3	2.6	8.9(FB)	--	740
		Jul/Aug 2000	50	14	1.2	--	--	0.9	2.0	7.1(FB)	--	290
		Sep/Oct 2000	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)

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Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
MW-8	1 st	Aug/Sep 1996	4.0	4.6	--	--	--	--	--	1.3	--	(1)
		Oct/Nov 1996	2.8	2.2	--	--	--	--	0.6	0.6	1.7 Acetone	(1)
		Feb/Mar 1997	1.5	4.5	--	--	--	--	--	1.3	1.1 Freon 11	(1)
	2 nd	Jun/Jul 1997	--	--	--	--	--	--	--	--	1.9 Carbon Disulfide	
		Sep/Oct 1997	3.2	3.6	--	--	--	--	--	1.2	1.0 Freon 11	29
		Jan/Feb 1998	1.8	1.3	--	--	--	--	--	0.8	0.8 Freon 11	11
		Apr/May 1998	1.3	1.3	--	--	--	--	--	0.5	--	7.6
	3 rd	Jul/Aug 1998	--	--	--	--	--	--	--	6.6 Dichloromethane ⁽⁴⁾	--	
		Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
	4 th	Aug 1999	--	--	--	--	--	--	--	--	--	--
		Nov/Dec 1999	0.9	0.8	--	--	--	--	--	--	--	5.2
		Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	10
		Sep/Oct 2000	--	--	--	--	--	--	--	--	--	5.2
MW-9	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	--	--	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	--	--	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	--	--	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	3.9 Unknown RT=6.21	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)

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MW-10	1 st	Aug/Sep 1996	0.7	18	0.5	--	--	--	1.2	1.4(TB)	--	(1)
		Oct/Nov 1996	0.6	6.6	1.0	1.9	--	--	0.8	1.1	3.0(B) Acetone	(1)
	2 nd	Feb/Mar 1997	--	5.2	--	--	--	--	--	0.6	--	(1)
		Jun/Jul 1997	--	2.2	--	--	--	--	--	--	--	11
		Sep/Oct 1997	--	4.3	1.3	1.2	--	--	--	1.0	--	16
		Jan/Feb 1998	--	1.1	2.2	1.6	--	--	--	1.4	--	4.7
	3 rd	Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	8.2 Dichloromethane ⁽⁴⁾	--
		Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
	4 th	Feb/Mar 1999	--	5.7	--	--	--	--	--	0.9	--	39
		May/Jun 1999	--	1.1	--	--	--	--	--	--	--	10
		Aug 1999	--	2.2	--	--	--	--	--	--	--	21
		Nov/Dec 1999	--	3.7	1.1	0.6	--	--	--	0.9	--	21
MW-11	Screen 1	Mar/Apr 2000	--	2.0	2.2	1.1	--	--	--	0.9	--	9.1
		Jul/Aug 2000	--	1.1	--	--	--	--	--	--	--	15
		Sep/Oct 2000	0.6	20	1.0	0.6	--	--	1.7	--	--	33
		Aug/Sep 1996	--	--	--	--	--	--	--	--	2.6(B) Acetone	(1)
	1 st	Oct/Nov 1996	--	--	--	--	--	--	--	--	7.1 MTBE	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	--	1.8 Acetone	(1)
		Jun/Jul 1997	1.4	--	--	--	--	--	--	--	--	--
		Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
	2 nd	Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	1.5	--	--	--	--	--	--	--	--	--
		Oct/Nov 1998	1.4	--	--	--	--	--	--	--	--	--
	3 rd	Feb/Mar 1999	--	--	--	--	--	--	0.9 ⁽⁴⁾	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	--	--	--	--	--	--	--	--	--	--
		Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
	4 th	Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	--	--	--	--	--	--	--	--	--	--

TABLE 3-1
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(concentrations in µg/L)

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 (see final page of Table for MCLs and notes)

Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 2	1 st	Aug/Sep 1996	2.4	--	--	--	--	--	--	1.0	--	(1)
		Oct/Nov 1996	1.1	--	--	--	--	--	--	1.2	--	(1)
		Feb/Mar 1997	1.7	--	--	--	--	--	--	1.0	--	(1)
		Jun/Jul 1997	1.2	--	--	--	--	--	--	1.0	--	--
	2 nd	Sep/Oct 1997	0.6	--	--	--	--	--	--	0.6	--	--
		Jan/Feb 1998	0.7	--	--	--	--	--	--	0.7	--	--
		Apr/May 1998	1.0	--	--	--	--	--	--	0.7	--	--
		Jul/Aug 1998	0.9	--	--	--	--	--	--	0.6	--	--
	3 rd	Oct/Nov 1998	0.6	--	--	--	--	--	--	0.7	--	--
		Feb/Mar 1999	--	--	--	--	--	--	0.7 ⁽⁴⁾	1.1	--	--
		May/Jun 1999	0.5	--	--	--	--	--	--	0.7(EB)	--	--
		Aug 1999	0.5	--	--	--	--	--	--	0.6	--	--
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	0.5(EB)	--	--
		Mar/Apr 2000	0.8	--	--	--	--	--	--	0.7(EB)	--	--
		Jul/Aug 2000	0.7	--	--	--	--	--	--	0.5(EB)	--	--
		Sep/Oct 2000	1.0	--	--	--	--	--	--	0.8	--	--
Screen 3	1 st	Aug/Sep 1996	0.9	--	--	--	--	--	--	1.3	2.9(B) Acetone	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	1.4	--	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	1.1	--	(1)
		Jun/Jul 1997	0.7	--	--	--	--	--	--	1.4	--	--
	2 nd	Sep/Oct 1997	0.6	--	--	--	--	--	--	1.3	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	1.4	--	--
		Apr/May 1998	1.0	--	--	--	--	--	--	1.3	--	--
		Jul/Aug 1998	1.5	--	--	--	--	--	--	1.4	--	--
	3 rd	Oct/Nov 1998	1.3	--	--	--	--	--	--	1.1	--	--
		Feb/Mar 1999	--	--	--	--	--	--	0.7 ⁽⁴⁾	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	0.7	--	--	--	--	--	--	0.7	--	--
	4 th	Nov/Dec 1999	0.9	--	--	--	--	--	--	0.7(EB)	--	--
		Mar/Apr 2000	2.4	--	--	--	--	--	--	1.0(EB)	--	--
		Jul/Aug 2000	0.9	--	--	--	--	--	--	0.6(EB)	--	--
		Sep/Oct 2000	1.0	--	--	--	--	--	--	0.6	--	--

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Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 4	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	0.5	2,4(B) Acetone	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	--	--	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	--	1.5 2-Methyl-1-Propene	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	0.5	--	--
		Apr/May 1998	--	--	--	--	--	--	--	0.5	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	0.5	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	0.6	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	0.7 ⁽⁴⁾	--	--
		May/Jun 1999	--	--	--	--	--	--	--	0.5(EB)	--	--
		Aug 1999	--	--	--	--	--	--	--	0.5	--	(2)
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	0.5(EB)	--	--
		Mar/Apr 2000	--	--	--	--	--	--	--	0.6(EB)	--	(2)
		Jul/Aug 2000	--	--	--	--	--	--	--	0.6(EB)	--	--
		Sep/Oct 2000	--	--	--	--	--	--	--	0.7	--	--
Screen 5	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	--	2,4(B) Acetone	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	--	1.1 Acetone	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	--	--	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	44 Carbon Disulfide ⁽³⁾	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	0.7 ⁽⁴⁾	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)

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 (see final page of Table for MCLs and notes)

Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
MW-12												
Screen 1	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	4.1	--	(1)
		Oct/Nov 1996	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)
		Feb/Mar 1997	--	--	--	--	--	--	--	5.8	--	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	0.5	--	--
	2 nd	Sep/Oct 1997	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)
		Jan/Feb 1998	--	--	--	--	--	--	--	0.8	--	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	--	--	--	--	--	--	--	--	--	--
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	--	--	--	--	--	--	--	--	--	--
Screen 2	1 st	Aug/Sep 1996	0.9	--	--	--	--	--	--	--	--	(1)
		Oct/Nov 1996	1.5	0.6	--	--	--	0.5	--	--	--	(1)
		Feb/Mar 1997	1.1	0.5	--	--	--	--	--	--	1.1(B) Acetone	(1)
		Jun/Jul 1997	1.0	--	--	--	--	--	--	0.8	--	6.9
	2 nd	Sep/Oct 1997	0.8	--	--	--	--	--	--	0.8	--	5.8
		Jan/Feb 1998	1.1	--	--	--	--	--	--	0.6	--	6.3
		Apr/May 1998	1.2	--	--	--	--	--	--	0.9	--	6.0
		Jul/Aug 1998	1.4	--	--	--	--	--	--	0.9	--	5.1
	3 rd	Oct/Nov 1998	1.3	--	--	--	--	--	--	1.0	--	4.2
		Feb/Mar 1999	1.3	--	--	--	--	--	--	0.9	--	4.1
		May/Jun 1999	0.8	--	--	--	--	--	--	0.6(EB)	0.8 Dichloromethane(EB)	5.0
		Aug 1999	0.5	--	--	--	--	--	--	--	--	--
	4 th	Nov/Dec 1999	0.5	--	--	--	--	--	--	--	0.5 Unknown (RT=4.79)	--
		Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	--	--	--	--	--	--	--	--	--	--

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Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 3	1 st	Aug/Sep 1996	4.5	--	--	--	--	--	--	1.3	--	(1)
		Oct/Nov 1996	3.8	--	--	--	--	--	--	1.3	1.6 Acetone	(1)
		Feb/Mar 1997	6.4	--	--	--	--	--	--	1.4	1.3(B) Acetone	(1)
		Jun/Jul 1997	20	--	--	--	--	--	--	1.6	--	5.7
	2 nd	Sep/Oct 1997	14	--	--	--	--	--	--	1.7	--	6.2
		Jan/Feb 1998	23 E	--	--	--	--	--	--	2.3	--	5.9
		Apr/May 1998	25	--	--	--	--	--	--	2.0	--	6.9
		Jul/Aug 1998	35	--	--	--	--	--	--	2.2	--	6.6
	3 rd	Oct/Nov 1998	27	--	--	--	--	--	--	2.2	--	6.9
		Feb/Mar 1999	23	--	--	--	--	--	--	--	--	--
		May/Jun 1999	19	--	--	--	--	--	--	2.0(EB)	--	8.7
		Aug 1999	19	--	--	--	--	--	--	2.3	--	--
	4 th	Nov/Dec 1999	23	--	--	--	--	--	--	2.4(EB)	0.5 Unknown	8.5
		Mar/Apr 2000	17	--	--	--	--	--	--	1.9(EB)	--	8.2
		Jul/Aug 2000	16	--	--	--	--	--	--	1.9(EB)	--	6.9
		Sep/Oct 2000	11	--	--	--	--	--	--	1.6	--	7.1
Screen 4	1 st	Aug/Sep 1996	6.3	--	--	--	--	--	--	1.4	--	(1)
		Oct/Nov 1996	5.1	--	--	--	--	--	--	1.4	2.5 Acetone	(1)
		Feb/Mar 1997	4.9	--	--	--	--	--	--	1.3	--	(1)
		Jun/Jul 1997	4.9	--	--	--	--	--	--	1.3	--	7.3
	2 nd	Sep/Oct 1997	3.8	--	--	--	--	--	--	1.0	--	7.6
		Jan/Feb 1998	4.0	--	--	--	--	--	--	1.1	--	8.0
		Apr/May 1998	4.3	--	--	--	--	--	--	1.2	--	8.0
		Jul/Aug 1998	5.1	--	--	--	--	--	--	1.2	--	6.0
	3 rd	Oct/Nov 1998	4.1	--	--	--	--	--	--	1.2	--	7.7
		Feb/Mar 1999	4.5	--	--	--	--	--	--	1.2	--	7.0
		May/Jun 1999	4.0	--	--	--	--	--	--	1.0(EB) ⁽³⁾	--	9.1
		Aug 1999	3.7	--	--	--	--	--	--	1.1	--	9.2
	4 th	Nov/Dec 1999	3.9	--	--	--	--	--	--	1.3(EB)	0.5 Unknown (RT=4.8)	8.5
		Mar/Apr 2000	5.3	0.5	--	--	--	--	--	1.3(EB)	--	8.7
		Jul/Aug 2000	4.1	--	--	--	--	--	--	1.2(EB)	--	8.1
		Sep/Oct 2000	4.3	--	--	--	--	--	--	1.2	--	7.9

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Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 5	1 st	Aug/Sep 1996	3.4	--	--	--	--	--	--	0.7	--	(1)
		Oct/Nov 1996	1.3	--	--	--	--	--	--	--	1.5 Acetone	(1)
		Feb/Mar 1997	1.7	--	--	--	--	--	--	0.5	--	(1)
		Jun/Jul 1997	1.9	--	--	--	--	--	--	0.5	--	4.1
	2 nd	Sep/Oct 1997	1.3	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	1.3	--	--	--	--	--	--	--	--	--
		Apr/May 1998	1.7	--	--	--	--	--	--	0.6	--	--
		Jul/Aug 1998	2.1	--	--	--	--	--	--	0.6	--	--
	3 rd	Oct/Nov 1998	2.0	--	--	--	--	--	--	0.6	--	--
		Feb/Mar 1999	1.3	--	--	--	--	--	--	0.7	--	--
		May/Jun 1999	1.6	--	--	--	--	--	--	0.5(EB)	--	--
		Aug 1999	1.9	--	--	--	--	--	--	0.6	--	--
	4 th	Nov/Dec 1999	1.4	--	--	--	--	--	--	0.5(EB)	--	--
		Mar/Apr 2000	2.0	--	--	--	--	--	--	0.6(EB)	--	4.7
		Jul/Aug 2000	1.4	--	--	--	--	--	--	0.5(EB)	--	4.0
		Sep/Oct 2000	2.5	--	--	--	--	--	--	0.7	--	4.1
MW-13	1 st	Aug/Sep 1996	21	47	0.6	--	2.5	1.5	0.7	21(TB)	--	(1)
		Oct/Nov 1996	27	27	--	--	1.9	1.5	0.6	14	--	(1)
		Feb/Mar 1997	18	28	--	--	0.9	1.1	0.6	9.2	--	(1)
		Jun/Jul 1997	6.4	24 E	--	--	0.9	0.5	--	11	--	130
	2 nd	Sep/Oct 1997	8.2	19	--	--	1.1	0.5	--	10	--	210
		Jan/Feb 1998	12	5.2	0.5	--	--	0.5 ⁽⁵⁾	--	2.9	1.8 Freon 11	99
		Apr/May 1998	13	17	0.6	--	--	0.9	0.6	5.7	--	100
		Jul/Aug 1998	15	29	0.6	--	--	1.2	0.7	7.7	1.0 Dichloromethane ⁽⁴⁾	59
	3 rd	Oct/Nov 1998	9.0	20	--	--	--	1.1	0.5	9.3	--	86
		Feb/Mar 1999	9.4	28	--	--	0.7	0.7	11	--	--	98
		May/Jun 1999	9.8	40	0.6	--	0.5	0.8	1.0	9.4	--	120
		Aug 1999	11	29	--	--	0.7	0.9	--	12	--	150
	4 th	Nov/Dec 1999	10.7	20	--	--	0.5	0.7	--	9.2	--	590
		Mar/Apr 2000	8.9	11	0.7	0.7	--	0.6	--	5.2	--	330
		Jul/Aug 2000	8.8	20	--	--	0.6	0.7	--	8.8	--	420
		Sep/Oct 2000	14	24	0.5	--	0.6	0.9	--	11	--	660

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MW-14												
Screen 1	1 st	Aug/Sep 1996	--	--	--	2.4	--	--	--	0.6	--	(1)
		Oct/Nov 1996	--	--	--	2.9	--	--	--	--	--	(1)
		Feb/Mar 1997	--	--	0.7	1.5	--	--	--	0.7	--	(1)
		Jun/Jul 1997	--	--	--	2.0	--	--	--	--	--	--
	2 nd	Sep/Oct 1997	--	--	--	1.9	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	2.1	--	--	--	0.5	--	--
		Apr/May 1998	--	--	1.2	0.8	--	--	--	0.8	--	4.4
		Jul/Aug 1998	--	--	0.8	1.7	--	--	--	0.6	--	4.4
	3 rd	Oct/Nov 1998	--	--	0.5	2.4	--	--	--	0.6	--	4.2
		Feb/Mar 1999	--	--	0.8	1.2	--	--	0.6 ⁽⁴⁾	0.6	--	4.2
		May/Jun 1999	--	--	0.5	2.6	--	--	--	--	--	--
		Aug 1999	--	--	--	1.7	--	--	--	--	--	--
	4 th	Nov/Dec 1999	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)
		Mar/Apr 2000	--	--	0.8	0.8	--	--	--	0.5(EB)	--	5.3
		Jul/Aug 2000	--	--	--	1.0	--	--	--	--	--	4.2
		Sep/Oct 2000	--	--	--	1.2	--	--	--	--	--	--
Screen 2	1 st	Aug/Sep 1996	--	2.8	1.6	1.4	--	--	--	1.5	--	(1)
		Oct/Nov 1996	--	1.5	1.6	1.0	--	--	--	0.9	0.6 1,2,3-Trichlorobenzene	(1)
		Feb/Mar 1997	--	0.9	1.9	1.3	--	--	--	0.8	0.8 1,2,3-Trichlorobenzene	(1)
		Jun/Jul 1997	--	1.1	1.7	1.5	--	--	--	0.9	0.5 1,2,3-Trichlorobenzene	--
	2 nd	Sep/Oct 1997	--	1.2	1.9	1.6	--	--	--	0.8	--	--
		Jan/Feb 1998	--	--	1.2	0.7	--	--	--	--	8.9 Carbon Disulfide ⁽³⁾	9.0
		Apr/May 1998	--	--	1.2	0.7	--	--	--	0.6	--	4.0
		Jul/Aug 1998	--	0.9	1.8	0.8	--	--	--	0.6	--	4.9
	3 rd	Oct/Nov 1998	--	0.6	1.5	0.7	--	--	--	0.5	--	4.2
		Feb/Mar 1999	--	0.9	1.6	0.7	--	--	0.6 ⁽⁴⁾	0.6	--	4.2
		May/Jun 1999	--	1.0	1.2	0.8	--	--	--	0.6(EB)	--	9.6
		Aug 1999	--	--	1.0	--	--	--	--	--	--	--
	4 th	Nov/Dec 1999	--	1.0	0.8	--	--	--	--	--	--	5.2
		Mar/Apr 2000	--	2.5	0.7	--	--	--	--	0.6(EB)	--	6.0
		Jul/Aug 2000	--	1.7	0.8	--	--	--	--	0.5(EB)	--	4.9
		Sep/Oct 2000	--	2.4	0.9	--	--	--	--	0.6	--	--

TABLE 3-1
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(concentrations in µg/L)

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(see final page of Table for MCLs and notes)

Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 3	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	--	--	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	--	--	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	--	--	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	--	--	4.3
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	--	5.6
		Apr/May 1998	--	--	--	--	--	--	--	--	--	5.8
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	5.9
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	6.7
		Feb/Mar 1999	--	--	0.5	--	--	--	0.6 ⁽⁴⁾	0.5	--	5.9
		May/Jun 1999	--	--	--	--	--	--	--	--	--	7.0
		Aug 1999	--	--	--	--	--	--	--	--	--	6.6
	4 th	Nov/Dec 1999	--	0.5	--	--	--	--	--	0.5(EB)	--	6.8
		Mar/Apr 2000	--	0.8	0.5	--	--	--	--	0.6(EB)	--	7.9
		Jul/Aug 2000	--	0.7	--	--	--	--	--	0.5(EB)	--	7.5
		Sep/Oct 2000	--	0.7	--	--	--	--	--	0.5	--	6.4
Screen 4	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	--	--	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	--	--	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	--	--	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	0.6 ⁽⁴⁾	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	9.9
		Aug 1999	--	--	--	--	--	--	--	--	--	4.0
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	4.1
		Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	4.2
		Sep/Oct 2000	--	--	--	--	--	--	--	--	--	--

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Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 5	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	--	2.1(B) Acetone	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	--	1.6(TB) Acetone	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	--	1.3 Carbon Disulfide	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	--	--	(1)
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	4.6 Carbon Disulfide ⁽³⁾	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	--	--	--	--	--	--	--	--	--	--
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	--	--	--	--	--	--	--	--	--	--
MW-15	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	--	--	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	--	2.6 Acetone	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	--	--	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)

TABLE 3-1
**SUMMARY OF VOLATILE ORGANIC COMPOUNDS AND PERCHLORATE DETECTED
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Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
MW-16	1 st	Aug/Sep 1996	125	33	1.3	--	2.4	2.2	2.0	40(TB)	--	(1)
		Oct/Nov 1996	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)
		Feb/Mar 1997	91	23	1.3	--	1.7	2.6	1.6	29	--	(1)
		Jun/Jul 1997	68	25	1.1	--	2.1	1.7	0.6	43	--	615
	2 nd	Sep/Oct 1997	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)
		Jan/Feb 1998	30	3.5	1.0	--	--	1.3	--	14	--	1230
		Apr/May 1998	42	12	0.8	--	1.4	1.6	1.2	20	--	640
		Jul/Aug 1998	58	19	1.3	--	0.8	2.7	1.2	23	0.6 Dichloromethane ⁽⁴⁾ 1.0 1,1,1-Trichloroethane	420
	3 rd	Oct/Nov 1998	51	18	1.0	--	1.5	1.6	1.4	29	1.1 1,1,1-Trichloroethane 13 Carbon Disulfide	220
		Feb/Mar 1999	67	20	1.4	--	1.1	1.8	1.1	24	--	790
		May/Jun 1999	58	15	1.0	--	0.8	1.3	1.2	23	0.5 Fluorotrichloromethane 0.6 1,1,1-Trichloroethane	650
	4 th	Aug 1999	70	19	1.8	--	1.1	1.9	1.1	26(EB)	0.6 1,1,1-Trichloroethane	930
		Nov/Dec 1999	80	10	3.0	--	0.7	5.3	0.7	24	--	770
		Mar/Apr 2000	24	4.3	0.9	--	--	4.0	--	17	--	1900
		Jul/Aug 2000	33	8.2	1.1	--	0.7	1.3	0.5	16	--	1500
		Sep/Oct 2000	53	8.0	2.2	--	0.6	3.5	0.7	20	--	1400
MW-17	Screen 1	Aug/Sep 1996	--	--	--	--	--	--	--	--	4.3(B) Acetone	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	--	1.4 Acetone	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	--	--	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
	2 nd	Jan/Feb 1998	--	--	--	--	--	--	--	2.9	--	--
		Apr/May 1998	--	--	--	--	--	--	--	3.2	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
		Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
	3 rd	Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
		Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
	4 th	Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)

TABLE 3-1
SUMMARY OF VOLATILE ORGANIC COMPOUNDS AND PERCHLORATE DETECTED
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Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 2	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	3.8	4.5(B) Acetone	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	6.0	--	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	5.2	--	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	4.1	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	6.1	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	5.4	--	--
		Apr/May 1998	--	--	--	--	--	--	--	3.2	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	2.4	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	3.7	--	--
		Feb/Mar 1999	--	--	--	--	--	--	1.0 ⁽⁴⁾	3.9	--	--
		May/Jun 1999	--	--	--	--	--	--	--	3.2(EB)	--	--
		Aug 1999	--	--	--	--	--	--	--	2.5	--	--
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	1.4(EB)	--	--
		Mar/Apr 2000	--	--	--	--	--	--	--	1.9(EB)	--	--
		Jul/Aug 2000	--	--	--	--	--	--	--	1.1(EB)	--	--
		Sep/Oct 2000	--	--	--	--	--	--	--	1.0	1.0 Unknown (RT=5.12)	--
Screen 3	1 st	Aug/Sep 1996	2.0	7.9	--	--	--	--	--	7.5	--	(1)
		Oct/Nov 1996	3.3	18	0.8	--	--	--	--	8.7	--	(1)
		Feb/Mar 1997	5.1	23	1.1	--	--	--	--	6.2	--	(1)
		Jun/Jul 1997	1.3	5.9	--	--	--	--	--	8.2	--	12
	2 nd	Sep/Oct 1997	6.6	22	1.4	--	--	--	--	9.2	--	55
		Jan/Feb 1998	3.3	8.7	--	--	--	--	--	6.8	--	25
		Apr/May 1998	--	0.9	--	--	--	--	--	5.3	--	--
		Jul/Aug 1998	--	1.0	--	--	--	--	--	4.9	--	--
	3 rd	Oct/Nov 1998	--	1.9	--	--	--	--	--	4.1	--	5.1
		Feb/Mar 1999	--	1.6	--	--	--	--	--	3.8	--	4.2
		May/Jun 1999	--	1.5	--	--	--	--	--	3.5(EB)	--	--
		Aug 1999	0.8	2.9	--	--	--	--	--	4.6	--	6.1
	4 th	Nov/Dec 1999	0.7	3.2	--	--	--	--	--	4.4(EB)	--	5.5
		Mar/Apr 2000	--	1.9	--	--	--	--	--	2.6(EB)	--	5.0
		Jul/Aug 2000	--	1.6	--	--	--	--	--	2.8(EB)	--	6.7
		Sep/Oct 2000	0.6	1.9	--	--	--	--	--	3.5	--	--

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Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 4	1 st	Aug/Sep 1996	--	9.5	0.5	--	--	--	--	1.1	--	(1)
		Oct/Nov 1996	--	8.9	--	--	--	--	--	1.5	--	(1)
		Feb/Mar 1997	--	5.8	--	--	--	--	--	0.7	--	(1)
		Jun/Jul 1997	--	4.5	--	--	--	--	--	0.6	--	13
	2 nd	Sep/Oct 1997	--	6.8	0.5	--	--	--	--	1.0	--	16
		Jan/Feb 1998	--	7.3	0.6	--	--	--	--	1.2	--	16
		Apr/May 1998	--	7.6	0.6	--	--	--	--	1.5	--	17
		Jul/Aug 1998	--	8.9	0.6	--	--	--	--	1.9	--	14
	3 rd	Oct/Nov 1998	--	6.2	0.5	--	--	--	--	1.9	--	12
		Feb/Mar 1999	--	3.8	--	--	--	--	1.0 ⁽⁴⁾	1.8	--	9.8
		May/Jun 1999	--	3.2	--	--	--	--	--	1.4(EB)	--	14
		Aug 1999	--	3.5	--	--	--	--	--	1.5	--	12
	4 th	Nov/Dec 1999	--	6.8	--	--	--	--	--	2.0(EB)	--	10
		Mar/Apr 2000	--	9.9	0.6	--	--	--	--	1.8(EB)	--	15
		Jul/Aug 2000	--	6.0	--	--	--	--	--	1.4(EB)	--	13
		Sep/Oct 2000	--	5.5	--	--	--	--	--	1.3	--	1.3
Screen 5	1 st	Aug/Sep 1996	--	13	0.6	--	--	--	--	1.7	3.4(B) Acetone	(1)
		Oct/Nov 1996	--	16	0.7	--	--	--	--	1.7	--	(1)
		Feb/Mar 1997	--	14	0.7	--	--	--	--	1.3	--	(1)
		Jun/Jul 1997	--	11	0.7	--	--	--	--	1.3	--	12
	2 nd	Sep/Oct 1997	--	8.6	0.6	--	--	--	--	1.4	--	15
		Jan/Feb 1998	--	7.9	--	--	--	--	--	1.5	--	15
		Apr/May 1998	--	8.8	0.6	--	--	--	--	1.8	--	15
		Jul/Aug 1998	--	8.9	0.6	--	--	--	--	2.0	--	13
	3 rd	Oct/Nov 1998	--	11	0.8	--	--	--	--	2.7	--	12
		Feb/Mar 1999	--	4.9	--	--	--	--	--	2.1	--	6.4
		May/Jun 1999	--	6.6	0.6	--	--	--	--	2.0(EB)	--	12
		Aug 1999	--	4.0	--	--	--	--	--	1.6	--	11
	4 th	Nov/Dec 1999	--	6.7	--	--	--	--	--	2.1(EB)	--	9.1
		Mar/Apr 2000	--	8.8	--	--	--	--	--	1.8(EB)	--	15
		Jul/Aug 2000	--	7.1	0.6	--	--	--	--	1.5(EB)	--	12
		Sep/Oct 2000	--	6.3	--	--	--	--	--	1.5	--	12

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Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
MW-18												
Screen 1	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	1.6	--	(1)
		Oct/Nov 1996	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)
		Feb/Mar 1997	--	--	--	--	--	--	--	3.0	--	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	0.8	--	--
	2 nd	Sep/Oct 1997	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)
		Jan/Feb 1998	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)
		Apr/May 1998	--	--	--	--	--	--	--	0.7	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	3.4 Unknown Hydrocarbon (RT=7.14)	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	4 th	Nov/Dec 1999	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Screen 2	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	7.3	--	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	8.2	--	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	1.9	--	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	4.5	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	2.5	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	3.7	--	--
		Apr/May 1998	--	--	--	--	--	--	--	3.2	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	0.9	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	3.0	0.8 Bromodichloromethane	--
		May/Jun 1999	--	--	--	--	--	--	--	0.8(EB)	--	--
		Aug 1999	--	--	--	--	--	--	--	--	--	--
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	--	--	--	--	--	--	--	2.5(EB)	0.9 Bromodichloromethane	--
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	--	--	--	--	--	--	--	--	--	--

TABLE 3-1
**SUMMARY OF VOLATILE ORGANIC COMPOUNDS AND PERCHLORATE DETECTED
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JET PROPULSION LABORATORY**

(concentrations in µg/L)

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(see final page of Table for MCLs and notes)

Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 3	1 st	Aug/Sep 1996	0.7	4.7	2.8	--	--	--	--	5.1	--	(1)
		Oct/Nov 1996	0.7	6.4	3.2	--	--	--	--	5.6	--	(1)
		Feb/Mar 1997	0.8	6.6	2.9	--	--	--	--	5.1	--	(1)
		Jun/Jul 1997	0.6	2.4	1.8	--	--	--	--	4.4	--	--
	2 nd	Sep/Oct 1997	--	3.0	1.9	--	--	--	--	6.2	--	--
		Jan/Feb 1998	--	1.9	1.7	--	--	--	--	6.6	4.1 Unknown (RT=4.33)	--
		Apr/May 1998	0.5	1.8	1.3	--	--	--	--	5.7	--	5.0
		Jul/Aug 1998	--	1.5	0.9	--	--	--	--	4.6	--	5.2
	3 rd	Oct/Nov 1998	--	1.4	0.8	--	--	--	--	4.2	--	--
		Feb/Mar 1999	--	1.0	0.5	--	--	--	--	3.5	--	--
		May/Jun 1999	--	1.1	--	--	--	--	--	2.5(EB)	0.6 Dichloromethane	--
		Aug 1999	--	1.0	--	--	--	--	--	2.8	--	--
	4 th	Nov/Dec 1999	--	0.8	--	--	--	--	--	0.8(EB)	--	--
		Mar/Apr 2000	--	1.1	0.5	--	--	--	--	3.1(EB)	--	--
		Jul/Aug 2000	--	0.6	--	--	--	--	--	2.6(EB)	--	--
		Sep/Oct 2000	--	0.7	--	--	--	--	--	2.8	--	--
Screen 4	1 st	Aug/Sep 1996	2.2	--	0.7	--	--	--	--	0.5	--	(1)
		Oct/Nov 1996	2.2	--	0.7	--	--	--	--	0.5	1.4(TB) Acetone	(1)
		Feb/Mar 1997	2.2	--	1.5	--	--	--	--	0.6	--	(1)
		Jun/Jul 1997	1.9	--	0.7	--	--	--	--	--	--	11
	2 nd	Sep/Oct 1997	2.4	--	0.7	--	--	--	--	--	1.5 Carbon Disulfide	12
		Jan/Feb 1998	2.6	--	1.0	--	--	--	--	0.5	--	11
		Apr/May 1998	3.1	0.6	1.4	--	--	--	--	0.8	--	13
		Jul/Aug 1998	2.5	0.6	1.2	--	--	--	--	0.6	--	16
	3 rd	Oct/Nov 1998	3.4	0.8	1.5	--	--	--	--	0.7	--	19
		Feb/Mar 1999	4.7	1.2	2.3	--	--	--	--	1.1	--	24
		May/Jun 1999	3.6	1.6	2.5	--	--	--	--	1.1(EB)	0.7 Dichloromethane	16
		Aug 1999	3.6	1.1	1.9	--	--	--	--	0.8	--	23
	4 th	Nov/Dec 1999	3.8	1.2	2.0	--	--	--	--	0.8(EB)	--	23
		Mar/Apr 2000	3.8	1.2	2.2	--	--	--	--	0.9(EB)	--	24
		Jul/Aug 2000	3.6	1.1	2.0	--	--	--	--	0.9(EB)	--	24
		Sep/Oct 2000	4.5	1.3	2.4	--	--	--	--	0.9	--	25

TABLE 3-1
SUMMARY OF VOLATILE ORGANIC COMPOUNDS AND PERCHLORATE DETECTED
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JET PROPULSION LABORATORY

(concentrations in µg/L)

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 (see final page of Table for MCLs and notes)

Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 5	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	--	--	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	--	1.6 Acetone	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	--	--	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	--	1.1 Carbon Disulfide	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	4.6 Hexane	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	0.8 Dichloromethane	--
		Aug 1999	--	--	--	--	--	--	--	--	1.0 Unknown (RT=4.25)	--
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	0.6 Unknown (RT=4.82)	--
		Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	--	--	--	--	--	--	--	--	--	--
MW-19												
Screen 1	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	0.9	3.7(B) Acetone	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	0.6	2.9 Acetone	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	0.8	--	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	2.5	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	1.4	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	0.8	--	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	--	--	--	--	--	--	--	--	--	--
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	--	--	--	--	--	--	--	--	--	--

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(concentrations in µg/L)

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Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 2	1 st	Aug/Sep 1996	--	--	0.8	--	--	--	--	--	3.0(B) Acetone	(1)
		Oct/Nov 1996	--	--	1.1	--	--	--	--	--	--	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	--	--	(1)
		Jun/Jul 1997	--	--	0.6	--	--	--	--	--	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	0.6	0.9	--	--	--	--	--	--	--
		Apr/May 1998	--	0.9	1.2	--	--	--	--	--	--	--
		Jul/Aug 1998	--	0.6	0.7	--	--	--	--	--	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	0.6	--	--	--	--	--	--	--	--
		May/Jun 1999	--	1.3	1.1	--	--	--	--	--	--	4.5
		Aug 1999	--	0.7	--	--	--	--	--	--	--	--
	4 th	Nov/Dec 1999	--	0.5	--	--	--	--	--	--	--	--
		Mar/Apr 2000	--	0.6	0.5	--	--	--	--	--	--	--
		Jul/Aug 2000	--	0.6	--	--	--	--	--	--	--	--
		Sep/Oct 2000	--	0.7	--	--	--	--	--	--	--	--
Screen 3	1 st	Aug/Sep 1996	--	--	3.1	--	--	--	--	--	2.6(B) Acetone	(1)
		Oct/Nov 1996	--	--	2.5	--	--	--	--	--	--	(1)
		Feb/Mar 1997	--	--	2.1	--	--	--	--	--	--	(1)
		Jun/Jul 1997	--	--	2.0	--	--	--	--	--	--	4.1
	2 nd	Sep/Oct 1997	--	--	1.5	--	--	--	--	--	0.6 Toluene	--
		Jan/Feb 1998	--	--	2.1	--	--	--	--	--	--	--
		Apr/May 1998	--	--	2.5	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	2.1	--	--	--	--	--	--	4.4
	3 rd	Oct/Nov 1998	--	--	2.0	--	--	--	--	--	--	4.2
		Feb/Mar 1999	--	--	1.5	--	--	--	--	--	--	--
		May/Jun 1999	--	0.9	2.7	--	--	--	--	--	--	7.2
		Aug 1999	--	0.6	1.9	--	--	--	--	--	--	4.4
	4 th	Nov/Dec 1999	--	0.6	1.9	--	--	--	--	--	--	5.0
		Mar/Apr 2000	--	0.8	2.0	--	--	--	--	--	--	4.8
		Jul/Aug 2000	--	0.7	1.8	--	--	--	--	--	--	5.0
		Sep/Oct 2000	--	--	1.3	--	--	--	--	--	--	4.4

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Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 4	1 st	Aug/Sep 1996	0.5	1.5	--	--	--	--	--	2.1	--	(1)
		Oct/Nov 1996	--	1.5	--	--	--	--	--	1.9	--	(1)
		Feb/Mar 1997	--	1.1	0.6	--	--	--	--	1.5	--	(1)
		Jun/Jul 1997	--	0.7	--	--	--	--	--	1.3	--	--
	2 nd	Sep/Oct 1997	--	0.7	0.6	--	--	--	--	1.7	--	4.9
		Jan/Feb 1998	--	0.5	0.6	--	--	--	--	1.3	--	--
		Apr/May 1998	--	0.8	1.0	--	--	--	--	1.6	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	1.4	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	2.2	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	3.0	--	--
		May/Jun 1999	--	0.7	--	--	--	--	--	2.6(EB)	--	--
		Aug 1999	--	0.5	--	--	--	--	--	2.7	--	--
	4 th	Nov/Dec 1999	--	0.5	--	--	--	--	--	2.1(EB)	--	--
		Mar/Apr 2000	--	--	--	--	--	--	--	2.0(EB)	--	--
		Jul/Aug 2000	--	--	--	--	--	--	--	3.2(EB)	--	--
		Sep/Oct 2000	--	--	--	--	--	--	--	2.9	--	--
Screen 5	1 st	Aug/Sep 1996	--	--	3.0	--	--	--	--	0.6	1.6(B) Unknown scan #940	(1)
		Oct/Nov 1996	--	--	2.4	--	--	--	--	--	--	(1)
		Feb/Mar 1997	--	--	1.7	--	--	--	--	--	--	(1)
		Jun/Jul 1997	--	--	1.5	--	--	--	--	--	--	--
	2 nd	Sep/Oct 1997	--	--	2.2	--	--	--	--	0.8	--	--
		Jan/Feb 1998	--	--	1.4	--	--	--	--	--	--	--
		Apr/May 1998	--	--	0.9	--	--	--	--	0.6	--	--
		Jul/Aug 1998	--	--	1.5	--	--	--	--	--	--	--
	3 rd	Oct/Nov 1998	--	--	1.5	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	1.3	--	--	--	--	--	--	--
		May/Jun 1999	--	--	2.1	--	--	--	--	--	0.7 Dichloromethane	4.4
		Aug 1999	--	--	1.5	--	--	--	--	--	--	4.2
	4 th	Nov/Dec 1999	--	--	1.5	--	--	--	--	--	--	--
		Mar/Apr 2000	--	--	1.4	--	--	--	--	0.6(EB)	--	--
		Jul/Aug 2000	--	0.5	1.7	--	--	--	--	0.5(EB)	--	4.2
		Sep/Oct 2000	--	0.6	2.0	--	--	--	--	--	--	--

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Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
MW-20												
Screen 1	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	0.7	3.4(B) Acetone	(1)
		Oct/Nov 1996	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)
		Feb/Mar 1997	--	--	--	--	--	--	--	1.4	2.4(EB) Acetone	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	0.8	--	5.7
	2 nd	Sep/Oct 1997	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)
		Jan/Feb 1998	--	--	--	--	--	--	--	1.4	--	6.3
		Apr/May 1998	--	--	--	--	--	--	--	2.5	--	5.5
		Jul/Aug 1998	--	--	--	--	--	--	--	1.8	--	5.9
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	0.8	--	7.8
		Feb/Mar 1999	--	--	--	--	--	--	--	2.2	--	4.9
		May/Jun 1999	--	--	--	--	--	--	--	1.9(EB)	--	4.4
		Aug 1999	--	--	--	--	--	--	--	0.6	--	7.5
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	1.3(EB)	--	7.7
		Mar/Apr 2000	--	--	--	--	--	--	--	1.1(EB)	--	7.6
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	7.5
		Sep/Oct 2000	--	--	--	--	--	--	--	0.8	--	7.9
Screen 2	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	7.7	4.0(B) Acetone	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	4.4	--	(1)
		Feb/Mar 1997	--	--	--	--	--	--	--	3.2	--	(1)
		Jun/Jul 1997	--	--	--	--	--	--	--	3.3	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	5.7	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	2.7	--	--
		Apr/May 1998	--	--	--	--	--	--	--	2.7	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	4.2	0.5 Dichlorobromomethane	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	3.6	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	4.2	--	--
		May/Jun 1999	--	--	--	--	--	--	--	4.6(EB)	0.6 Bromodichloromethane	--
		Aug 1999	--	--	--	--	--	--	--	4.8	0.6 Bromodichloromethane	--
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	3.8(EB)	--	--
		Mar/Apr 2000	--	--	--	--	--	--	--	3.8(EB)	--	--
		Jul/Aug 2000	--	--	--	--	--	--	--	4.1(EB)	0.6 Bromodichloromethane	--
		Sep/Oct 2000	--	--	--	--	--	--	--	4.5	0.7 Bromodichloromethane	--

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Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 3	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	--	2.7(B) Acetone	(I)
		Oct/Nov 1996	--	--	--	--	--	--	--	0.6	2.3 Acetone	(I)
		Feb/Mar 1997	--	--	--	--	--	--	--	--	--	(I)
		Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	3.4 Unknown (RT=6.2)	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	--	--	--	--	--	--	--	--	--	--
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	--	--	--	--	--	--	--	--	--	--
Screen 4	1 st	Aug/Sep 1996	--	--	--	--	--	--	--	--	3.8(B) Acetone	(I)
		Oct/Nov 1996	--	--	--	--	--	--	--	--	--	(I)
		Feb/Mar 1997	--	--	--	--	--	--	--	--	--	(I)
		Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	20
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	--	--	--	--	--	--	--	--	--	--
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	--	--	--	--	--	--	--	--	--	--

TABLE 3-1
**SUMMARY OF VOLATILE ORGANIC COMPOUNDS AND PERCHLORATE DETECTED
DURING THE FIRST 4 YEARS OF LONG-TERM QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY**

(concentrations in µg/L)

Values above state or Federal MCLs, or above/equal to action levels, are bold and shaded
(see final page of Table for MCLs and notes)

Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 5												
1 st	Aug/Sep 1996	--	--	--	--	--	--	--	--	--	4.8(B) Acetone	(1)
	Oct/Nov 1996	--	--	--	--	--	--	--	--	--	--	(1)
	Feb/Mar 1997	--	--	--	--	--	--	--	--	--	--	(1)
	Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--	--
2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--	--
	Apr/May 1998	--	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--	--
3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--	8.2
	Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--	--
	May/Jun 1999	--	--	--	--	--	--	--	--	--	--	--
	Aug 1999	--	--	--	--	--	--	--	--	--	0.7 Carbonyl Sulfide	--
4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--	--
	Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--	--
	Sep/Oct 2000	--	--	--	--	--	--	--	--	--	--	--
MW-21												
Screen 1	Aug/Sep 1996	--	33	0.7	--	--	--	--	1.8	2.3(B) Acetone	(1)	
	Oct/Nov 1996	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)
	Feb/Mar 1997	--	29	--	--	--	--	--	2.2	--	--	(1)
	Jun/Jul 1997	--	20	--	--	--	--	--	1.6	--	--	19
2 nd	Sep/Oct 1997	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)
	Jan/Feb 1998	--	16	--	--	--	--	--	1.8	--	--	14
	Apr/May 1998	--	16	--	--	--	--	--	1.8	--	--	14
	Jul/Aug 1998	--	16	0.6	--	--	--	--	1.8	--	--	13
3 rd	Oct/Nov 1998	--	10	--	--	--	--	--	1.6	--	--	13
	Feb/Mar 1999	--	20	0.5	--	--	--	--	1.8	--	--	14
	May/Jun 1999	--	20	0.5	--	--	--	--	1.6(EB)	--	--	15
	Aug 1999	--	17	0.5	--	--	--	--	1.7	--	--	12
4 th	Nov/Dec 1999	--	15	0.7	--	--	--	--	2.2(EB)	--	--	16
	Mar/Apr 2000	--	17	0.7	--	--	--	--	1.8(EB)	--	--	12
	Jul/Aug 2000	--	12	0.5	--	--	--	--	1.7(EB)	--	--	16
	Sep/Oct 2000	--	12	0.6	--	--	--	--	1.6	--	--	16

TABLE 3-1

**SUMMARY OF VOLATILE ORGANIC COMPOUNDS AND PERCHLORATE DETECTED
DURING THE FIRST 4 YEARS OF LONG-TERM QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY**

(concentrations in µg/L)

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(see final page of Table for MCLs and notes)

Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 2	1 st	Aug/Sep 1996	--	--	0.9	--	--	--	--	0.5	--	(1)
		Oct/Nov 1996	--	0.6	2.3	--	--	--	--	0.6	1.4(TB) Acetone	(1)
		Feb/Mar 1997	--	--	1.1	--	--	--	--	--	--	(1)
		Jun/Jul 1997	--	--	0.7	--	--	--	--	--	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	1.1	--	--	--	--	--	--	--
		Apr/May 1998	--	--	1.0	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	0.7	--	--	--	--	0.7	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	0.7	--	--
		Feb/Mar 1999	--	--	0.8	--	--	--	--	--	--	--
		May/Jun 1999	--	--	0.6	--	--	--	--	--	--	--
		Aug 1999	--	--	0.8	--	--	--	--	--	--	--
	4 th	Nov/Dec 1999	--	--	1.2	--	--	--	--	--	--	4.6
		Mar/Apr 2000	--	--	0.9	--	--	--	--	--	1.8 Carbonyl Sulfide	4.1
		Jul/Aug 2000	--	--	0.9	--	--	--	--	--	--	--
		Sep/Oct 2000	--	--	1.1	--	--	--	--	--	--	--
Screen 3	1 st	Aug/Sep 1996	--	0.7	1.5	--	--	--	--	0.5	--	(1)
		Oct/Nov 1996	--	0.9	1.6	--	--	--	--	--	1.2 Acetone	(1)
		Feb/Mar 1997	--	0.8	1.6	--	--	--	--	--	--	(1)
		Jun/Jul 1997	--	--	1.2	--	--	--	--	--	--	--
	2 nd	Sep/Oct 1997	--	0.6	1.3	--	--	--	--	--	--	--
		Jan/Feb 1998	--	0.5	1.4	--	--	--	--	--	--	--
		Apr/May 1998	--	--	1.1	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	0.9	--	--	--	--	--	--	--
	3 rd	Oct/Nov 1998	--	--	0.8	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	1.0	--	--	--	--	--	--	4.1
		May/Jun 1999	--	0.6	1.4	--	--	--	--	--	--	--
		Aug 1999	--	0.6	1.3	--	--	--	--	--	--	--
	4 th	Nov/Dec 1999	--	0.9	2.2	--	--	--	--	0.6(EB)	4.9 Carbonyl Sulfide	4.8
		Mar/Apr 2000	--	0.9	2.3	--	--	--	--	0.6(EB)	--	--
		Jul/Aug 2000	--	0.6	1.5	--	--	--	--	0.7(EB)	--	--
		Sep/Oct 2000	--	0.7	1.6	--	--	--	--	0.8	--	--

TABLE 3-1
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(concentrations in µg/L)

Values above state or Federal MCLs, or above/equal to action levels, are bold and shaded
(see final page of Table for MCLs and notes)

Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 4	1 st	Aug/Sep 1996	--	0.8	4.2	--	--	--	--	--	--	(1)
		Oct/Nov 1996	--	--	2.5	--	--	--	--	--	1.6 Acetone	(1)
		Feb/Mar 1997	--	--	1.8	--	--	--	--	--	--	(1)
		Jun/Jul 1997	--	--	2.8	--	--	--	--	--	--	4.6
	2 nd	Sep/Oct 1997	--	0.6	4.4	--	--	--	--	--	--	7.7
		Jan/Feb 1998	--	--	2.4	--	--	--	--	--	--	--
		Apr/May 1998	--	0.6	4.4	--	--	--	--	--	0.7 cis-1,2-Dichloroethene	--
		Jul/Aug 1998	--	0.8	4.3	--	--	--	--	--	0.8 cis-1,2-Dichloroethene	4.3
	3 rd	Oct/Nov 1998	--	1.1	8.3	--	--	--	--	0.6	1.3 cis-1,2-Dichloroethene	--
		Feb/Mar 1999	--	--	3.8	--	--	--	--	--	0.7 cis-1,2-Dichloroethene	--
		May/Jun 1999	--	--	3.2	--	--	--	--	--	0.6 cis-1,2-Dichloroethene	4.8
		Aug 1999	--	0.7	6.1	--	--	--	--	0.6	1.2 cis-1,2-Dichloroethene	--
	4 th	Nov/Dec 1999	--	0.6	6.0	--	--	--	--	--	5.1 Carbonyl Sulfide	--
		Mar/Apr 2000	--	--	4.0	--	--	--	--	--	1.1 cis-1,2-Dichloroethene	
		Jul/Aug 2000	--	0.5	6.2	--	--	--	--	0.7(EB)	0.9 cis-1,2-Dichloroethene	--
		Sep/Oct 2000	--	0.8	8.6	--	--	--	--	1.0	1.3 cis-1,2-Dichloroethene	--
											0.7 Bromodichloromethane	--
											0.5 Chlorodibromomethane	--
											1.5 cis-1,2-Dichloroethene	--
Screen 5	1 st	Aug/Sep 1996	--	--	4.5	--	--	--	--	0.6	--	(1)
		Oct/Nov 1996	--	--	3.1	--	--	--	--	--	--	(1)
		Feb/Mar 1997	--	--	3.0	--	--	--	--	--	--	(1)
		Jun/Jul 1997	--	--	3.0	--	--	--	--	--	--	--
	2 nd	Sep/Oct 1997	--	--	2.9	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	4.1	--	--	--	--	--	0.6 cis-1,2-Dichloroethene	5.2
		Apr/May 1998	--	--	6.5	--	--	--	--	--	5.0 Carbon Disulfide ⁽³⁾	
		Jul/Aug 1998	--	--	7.6	--	--	--	--	0.6	1.0 cis-1,2-Dichloroethene	5.8
	3 rd	Oct/Nov 1998	--	--	6.7	--	--	--	--	0.6	1.5 cis-1,2-Dichloroethene	4.0
		Feb/Mar 1999	--	0.5	7.7	--	--	--	--	0.7	1.4 cis-1,2-Dichloroethene	4.2
		May/Jun 1999	--	--	8.2	--	--	--	--	0.7(EB) ⁽³⁾	1.5 cis-1,2-Dichloroethene	--
		Aug 1999	--	0.6	9.6	--	--	--	--	0.8	1.6 cis-1,2-Dichloroethene	--
											1.4 Chlorodifluoromethane	

TABLE 3-1
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(concentrations in $\mu\text{g/L}$)
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(see final page of Table for MCLs and notes)

Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
<i>MW-22⁽⁹⁾</i>	4 th	Nov/Dec 1999	--	0.7	11.4	--	--	--	--	1.0(EB)	2.2 cis-1,2-Dichloroethene	4.9
		Mar/Apr 2000	--	0.7	12	--	--	--	--	1.2(EB)	2.5 cis-1,2-Dichloroethene	4.2
		Jul/Aug 2000	--	0.6	11	--	--	--	--	1.2(EB)	0.6 Bromodichloromethane	
		Sep/Oct 2000	--	0.8	15	--	--	--	--	1.7	2.2 cis-1,2-Dichloroethene	--
<i>Screen 1</i>	2 nd	Sep/Oct 1997	--	--	2.0	0.7	--	--	--	--	--	--
		Jan/Feb 1998	--	--	2.3	0.8	--	--	0.5	--	--	--
		Apr/May 1998	--	0.9	2.1	0.8	--	--	--	0.5	--	5.4
		Jul/Aug 1998	--	0.9	1.7	0.6	--	--	--	--	--	6.4
	3 rd	Oct/Nov 1998	--	--	1.7	0.7	--	--	--	--	--	5.0
		Feb/Mar 1999	--	0.6	3.6	1.0	--	--	1.3 ⁽⁴⁾	0.5	--	6.4
		May/Jun 1999	--	--	2.7	1.0	--	--	--	--	--	4.9
		Aug 1999	--	--	2.1	0.7	--	--	--	--	--	--
	4 th	Nov/Dec 1999	--	--	3.6	0.9	--	--	--	0.5(EB)	--	4.2
		Mar/Apr 2000	--	--	3.1	0.7	--	--	--	--	--	4.3
		Jul/Aug 2000	--	--	3.2	0.6	--	--	--	--	--	4.4
		Sep/Oct 2000	--	--	2.7	0.7	--	--	--	--	1.9 Unknown (RT=5.12)	5.6
<i>Screen 2</i>	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	0.8 Dichloromethane	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	4.9
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	0.6	--	--	--	--	1.4 ⁽⁴⁾	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	--	--	--	--	--	--	--	--	--	--
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	--	--	--	--	--	--	--	--	--	--

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Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 3	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	15
		Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	1.3 ⁽⁴⁾	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	--	--	--	--	--	--	--	--	--	--
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	--	--	--	--	--	--	--	3.4 Unknown (RT=5.13)	--	--
Screen 4	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	1.3 ⁽⁴⁾	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
Screen 5	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	1.3 ⁽⁴⁾	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)

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Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
MW-23⁽⁹⁾												
Screen 1	2 nd	Sep/Oct 1997	--	3.1	0.6	0.8	--	--	--	--	--	4.4
		Jan/Feb 1998	--	4.2	1.6	1.2	--	--	--	0.9	0.6 1,2,3-Trichlorobenzene	5.2
		Apr/May 1998	0.5	16	0.8	1.2	--	--	--	1.9	--	16
		Jul/Aug 1998	0.5	9.2	--	--	--	--	--	1.0	2.2 Dichloromethane ⁽³⁾	19
	3 rd	Oct/Nov 1998	0.8	15	--	--	--	--	--	1.9	--	21
		Feb/Mar 1999	0.6	15	1.1	1.4	--	--	--	1.9	0.06 1,2,3-Trichlorobenzene	8.4
		May/Jun 1999	--	7.0	1.1	--	--	--	0.6	1.0(EB)	0.7 1,2,3-Trichlorobenzene	7.6
		Aug 1999	--	3.5	1.1	1.0	--	--	--	0.7(EB)	--	--
	4 th	Nov/Dec 1999	--	1.2	1.3	1.0	--	--	--	0.5(EB)	1.1 1,2,3-Trichlorobenzene	4.1
		Mar/Apr 2000	--	1.5	2.3	1.3	--	--	--	0.7(EB)	1.2 1,2,3-Trichlorobenzene	4.3
		Jul/Aug 2000	--	1.4	0.9	--	--	0.6	--	0.5(EB)	--	4.9
		Sep/Oct 2000	--	0.6	1.0	0.7	--	--	--	--	--	--
Screen 2	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	7.6
		Jan/Feb 1998	--	--	--	--	--	--	--	0.7	--	6.7
		Apr/May 1998	--	--	--	--	--	--	--	--	--	7.5
		Jul/Aug 1998	--	1.1	1.0	0.8	--	--	--	0.7	1.8 Dichloromethane ⁽⁴⁾	7.8
	3 rd	Oct/Nov 1998	--	0.6	0.7	0.6	--	--	--	0.6	--	16
		Feb/Mar 1999	--	--	--	--	--	--	--	0.5	--	7.7
		May/Jun 1999	--	--	--	0.5	--	--	--	0.6(EB)	--	7.8
		Aug 1999	--	--	--	--	--	--	--	0.5(EB)	--	--
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	7.5
		Mar/Apr 2000	--	--	0.6	--	--	--	--	0.6(EB)	--	7.2
		Jul/Aug 2000	--	--	0.7	--	--	--	--	0.7(EB)	--	6.6
		Sep/Oct 2000	--	--	0.6	--	--	--	--	0.6	--	7.0
Screen 3	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	1.7 Dichloromethane ⁽⁴⁾	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	--	--	--	--	--	--	--	--	--	--

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DURING THE FIRST 4 YEARS OF LONG-TERM QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY

(concentrations in µg/L)

Values above state or Federal MCLs, or above/equal to action levels, are bold and shaded
 (see final page of Table for MCLs and notes)

Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 4	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	--	--	--	--	--	--	--	--	--	--
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	2.3 Dichloromethane ⁽⁴⁾	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Screen 5	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	1.7 Dichloromethane ⁽⁴⁾	--
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	3.0 Unknown (RT=3.93)	--
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	4 th	Oct/Nov 1998	--	--	--	--	--	--	--	--	3.1 2-Methyl-1-propene	17
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
MW-24⁽⁹⁾												
Screen 1	2 nd	Sep/Oct 1997	5.0	5.0	--	--	--	--	0.6	3.1	--	92
		Jan/Feb 1998	30 E	15	0.5	--	0.8	--	0.6	15	--	330
		Apr/May 1998	6.7	5.4	--	--	--	--	--	3.3	--	74
		Jul/Aug 1998	--	1.7	--	--	--	--	--	0.9	--	20

TABLE 3-1
SUMMARY OF VOLATILE ORGANIC COMPOUNDS AND PERCHLORATE DETECTED
DURING THE FIRST 4 YEARS OF LONG-TERM QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY

(concentrations in µg/L)

Values above state or Federal MCLs, or above/equal to action levels, are bold and shaded
 (see final page of Table for MCLs and notes)

Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate
Screen 1	3 rd	Oct/Nov 1998	1.0	1.3	--	--	--	--	--	0.8	--	16
		Feb/Mar 1999	1.0	1.5	--	--	--	--	--	0.8	--	14
		May/Jun 1999	1.0	1.6	--	--	--	--	--	0.6(EB)	--	14
		Aug 1999	1.8	3.6	--	--	--	--	--	1.3	--	22
	4 th	Nov/Dec 1999	6.3	5.3	--	--	--	--	--	2.5(EB)	--	91
		Mar/Apr 2000	15	8.6	0.6	--	--	--	0.6	5.1(EB)	--	270
		Jul/Aug 2000	18	7.7	0.9	--	--	--	--	4.5(EB)	--	440
		Sep/Oct 2000	28	8.4	1.1	--	--	0.6	0.6	5.5	--	590
Screen 2	2 nd	Sep/Oct 1997	13	1.3	--	--	--	--	--	3.8	--	200
		Jan/Feb 1998	6.9	0.7	--	--	--	--	--	2.4	--	110
		Apr/May 1998	29	3.3	0.9	--	--	1.4	--	9.4	--	480
		Jul/Aug 1998	58	4.0	1.5	--	--	2.0	--	8.4	--	500
	3 rd	Oct/Nov 1998	19	2.3	0.8	--	--	0.8	--	5.9	--	490
		Feb/Mar 1999	30	3.0	1.0	--	--	1.5	--	6.6	--	580
		May/Jun 1999	33	4.3	1.3	--	--	1.8	--	7.7(EB)	--	690
		Aug 1999	35	3.6	0.9	--	--	1.4	--	7.5	--	700
Screen 3	4 th	Nov/Dec 1999	25	3.7	0.9	--	--	1.4	--	7.4(EB)	--	570
		Mar/Apr 2000	28	4.3	1.1	--	--	1.9	--	8.0(EB)	--	570
		Jul/Aug 2000	23	3.3	0.8	--	--	1.2	--	7.7(EB)	--	530
		Sep/Oct 2000	21	3.0	0.8	--	--	1.4	--	6.6	--	430
	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
Screen 4	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--
		Aug 1999	--	--	--	--	--	--	--	--	--	--
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
		Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
		Sep/Oct 2000	--	--	--	--	--	--	--	--	--	--

TABLE 3-1
**SUMMARY OF VOLATILE ORGANIC COMPOUNDS AND PERCHLORATE DETECTED
 DURING THE FIRST 4 YEARS OF LONG-TERM QUARTERLY GROUNDWATER MONITORING,
 JET PROPULSION LABORATORY**

(concentrations in µg/L)

Values above state or Federal MCLs, or above/equal to action levels, are bold and shaded
 (see final page of Table for MCLs and notes)

Sampling Location	Program Year	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Total Trihalomethanes (Primarily Chloroform)	Other Volatile Organic Compounds (including 1,4-Dioxane) ⁽¹⁾	Perchlorate	
Screen 4	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--	
		Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--	
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--	
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--	
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--	
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--	
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--	
		Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--	
		Mar/Apr 2000	--	--	--	--	--	--	--	--	--	(2)	
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--	
		Sep/Oct 2000	--	--	--	--	--	--	--	--	--	(2)	
Screen 5	2 nd	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--	
		Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--	
		Apr/May 1998	--	--	--	--	--	--	--	--	--	--	
		Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--	
	3 rd	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--	
		Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--	
		May/Jun 1999	--	--	--	--	--	--	--	--	--	--	
		Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	
	4 th	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--	
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	
		Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--	
		Sep/Oct 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	
Practical Quantitation Limit			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4.0	
California Maximum Contaminant Level			0.5	5.0	5.0	5.0	0.5	6.0	1,200	100	150 Freon 11 ⁽¹⁰⁾ 6.0 cis-1,2-Dichloroethene ⁽¹⁰⁾ 1,1,1-Trichloroethane ⁽¹⁰⁾	18 ⁽¹¹⁾	
EPA Region IX Maximum Contaminant Level			5.0	5.0	5.0	NE	5.0	7.0	NE	100	5.0 Dichloromethane ⁽¹⁰⁾ 70 cis-1,2-Dichloroethene ⁽¹⁰⁾ 100 Bromodichloromethane ⁽¹⁰⁾ 1,1,1-Trichloroethane ⁽¹⁰⁾	NE	

TABLE 3-1**SUMMARY OF VOLATILE ORGANIC COMPOUNDS AND PERCHLORATE DETECTED
DURING THE FIRST 4 YEARS OF LONG-TERM QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY**

(concentrations in µg/L)

Values above state or Federal MCLs, or above/equal to action levels, are bold and shaded
(see final page of Table for MCLs and notes)

- : Not detected.
B: Compound detected in laboratory method blank.
EB: Compound detected in associated equipment blank.
RT: Retention time.
TB: Compound detected in associated trip blank.
FB: Compound detected in associated field blank.
E: Estimated concentration; result exceeded calibration range.
NE: Not established.
1: Perchlorate not part of monitoring program.
2: Monitoring point not sampled at all, or not sampled for the particular constituent due to changes in the sampling program as agreed to by the EPA, DTSC, and RWQCB.
3: Suspected by the laboratory to have resulted from carry over in analysis (see January/February 1998 report).
4: Attributed to laboratory contamination.
5: Results from duplicate analysis; original sample was non-detect.
6: Not sampled, U.S. Filter Pilot Test being conducted.
7: Not sampled, no water over screen.
8: Not sampled due to mechanical failure.
9: Wells installed June-August 1997.
10: Only VOCs for which MCLs have been established are listed.
11: California Department of Health Services Interim Action Level.

TABLE 3-2

**SUMMARY OF METALS DETECTED DURING
THE FIRST 4 YEARS OF LONG-TERM
QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY**
(concentrations in mg/L)

Values above state or Federal MCLs, or above/equal to action levels, are bold and shaded
(see final page of Table for MCLs and notes)

Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)	
MW-1	1 st	Aug/Sep 1996	--	--	--	--	0.8	
		Oct/Nov 1996	--	--	--	--	0.5	
		Feb/Mar 1997	--	--	--	--	2.5	
		Jun/Jul 1997	--	--	--	--	1.9	
	2 nd	Sep/Oct 1997	--	--	--	--	0.7	
		Jan/Feb 1998	--	--	--	--	1.6	
		Apr/May 1998	--	--	--	--	0.5	
		Jul/Aug 1998	--	0.009	0.055⁽¹⁾	--	1.0	
	3 rd	Oct/Nov 1998	--	--	--	--	1.1	
		Feb/Mar 1999	--	--	--	--	1.9	
		May/Jun 1999	--	--	--	--	0.4	
		Aug 1999	(2)	(2)	(2)	(2)	(2)	
	4 th	Nov/Dec 1999	(2)	(2)	--	--	1.2	
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	
		Jul/Aug 2000	--	--	--	--	0.1	
		Sep/Oct 2000	(2)	(2)	(2)	(2)	(2)	
<hr/>								
MW-3								
Screen 1	1 st	Aug/Sep 1996	--	--	--	--	7.2	
		Oct/Nov 1996	--	--	--	--	3.1	
		Feb/Mar 1997	--	--	--	--	6.1	
		Jun/Jul 1997	--	--	--	--	2.6	
	2 nd	Sep/Oct 1997	--	--	--	--	2.1	
		Jan/Feb 1998	--	--	--	--	2.9	
		Apr/May 1998	--	--	--	--	4.8	
		Jul/Aug 1998	--	--	--	--	4.5	
	3 rd	Oct/Nov 1998	--	--	--	--	3.8	
		Feb/Mar 1999	--	--	--	--	4.7	
		May/Jun 1999	--	--	--	--	4.6	
		Aug 1999	(2)	(2)	(2)	(2)	(2)	
	4 th	Nov/Dec 1999	(2)	(2)	--	--	4.5	
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	
		Jul/Aug 2000	--	--	--	--	7.6	
		Sep/Oct 2000	(2)	(2)	(2)	(2)	(2)	
Screen 2	1 st	Aug/Sep 1996	--	--	--	--	1.7	
		Oct/Nov 1996	--	--	--	--	2.7	
		Feb/Mar 1997	--	--	--	--	3.8	
		Jun/Jul 1997	--	--	--	--	1.1	
	2 nd	Sep/Oct 1997	--	--	--	--	2.1	
		Jan/Feb 1998	--	--	--	--	2.3	
		Apr/May 1998	--	--	--	--	4.3	
		Jul/Aug 1998	--	0.004	--	--	3.3	
	3 rd	Oct/Nov 1998	--	--	--	--	4.3	
		Feb/Mar 1999	--	--	--	--	2.1	
		May/Jun 1999	--	--	--	--	3.1	
		Aug 1999	(2)	(2)	--	--	1.0	

TABLE 3-2

**SUMMARY OF METALS DETECTED DURING
THE FIRST 4 YEARS OF LONG-TERM
QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY**
(concentrations in mg/L)

Values above state or Federal MCLs, or above/equal to action levels, are bold and shaded
(see final page of Table for MCLs and notes)

Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
Screen 3	4 th	Nov/Dec 1999	(2)	(2)	--	--	3.9
		Mar/Apr 2000	(2)	(2)	--	--	3.5
		Jul/Aug 2000	--	--	--	--	1.2
		Sep/Oct 2000	(2)	(2)	--	--	2.0
Screen 3	1 st	Aug/Sep 1996	--	--	--	--	5.2
		Oct/Nov 1996	--	--	--	--	2.7
		Feb/Mar 1997	--	--	--	--	1.7
		Jun/Jul 1997	--	--	--	--	3.4
Screen 3	2 nd	Sep/Oct 1997	--	--	--	--	5.0
		Jan/Feb 1998	--	--	--	--	4.9
		Apr/May 1998	--	--	--	--	4.7
		Jul/Aug 1998	--	--	--	--	4.6
Screen 3	3 rd	Oct/Nov 1998	--	--	--	--	3.3
		Feb/Mar 1999	--	--	--	--	3.2
		May/Jun 1999	--	--	--	--	1.8
		Aug 1999	(2)	(2)	--	--	2.5
Screen 4	4 th	Nov/Dec 1999	(2)	(2)	--	--	2.3
		Mar/Apr 2000	(2)	(2)	--	--	2.1
		Jul/Aug 2000	--	--	--	--	1.1
		Sep/Oct 2000	(2)	(2)	--	--	2.2
Screen 4	1 st	Aug/Sep 1996	--	--	--	--	4.3
		Oct/Nov 1996	--	--	--	--	2.6
		Feb/Mar 1997	--	--	--	--	4.5
		Jun/Jul 1997	--	--	--	--	2.7
Screen 4	2 nd	Sep/Oct 1997	--	--	--	--	2.5
		Jan/Feb 1998	--	--	--	--	3.0
		Apr/May 1998	--	--	--	--	3.6
		Jul/Aug 1998	--	--	--	--	3.1
Screen 4	3 rd	Oct/Nov 1998	--	--	--	--	1.3
		Feb/Mar 1999	--	--	--	--	3.5
		May/Jun 1999	--	--	--	--	1.5
		Aug 1999	(2)	(2)	--	--	1.1
Screen 5	4 th	Nov/Dec 1999	(2)	(2)	--	--	2.6
		Mar/Apr 2000	(2)	(2)	--	--	2.2
		Jul/Aug 2000	--	--	--	--	1.6
		Sep/Oct 2000	(2)	(2)	--	--	4.4
Screen 5	1 st	Aug/Sep 1996	0.011	--	--	--	1.5
		Oct/Nov 1996	0.007	--	--	--	1.9
		Feb/Mar 1997	--	--	--	--	2.5
		Jun/Jul 1997	0.007	--	--	--	0.8
Screen 5	2 nd	Sep/Oct 1997	0.010	--	--	--	1.0
		Jan/Feb 1998	0.009	0.008	--	--	2.3
		Apr/May 1998	--	0.002	--	--	2.0
		Jul/Aug 1998	0.006	--	--	--	3.2

TABLE 3-2

**SUMMARY OF METALS DETECTED DURING
THE FIRST 4 YEARS OF LONG-TERM
QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY**
(concentrations in mg/L)

Values above state or Federal MCLs, or above/equal to action levels, are bold and shaded
(see final page of Table for MCLs and notes)

Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
3 rd	Oct/Nov 1998	--	--	--	--	--	4.2
	Feb/Mar 1999	--	--	--	--	--	4.4
	May/Jun 1999	0.006	--	--	--	--	4.2
	Aug 1999	(2)	(2)	(2)	(2)	(2)	5.4
4 th	Nov/Dec 1999	(2)	(2)	--	--	--	4.9
	Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	10.4
	Jul/Aug 2000	--	--	--	--	--	11.6
	Sep/Oct 2000	(2)	(2)	(2)	(2)	(2)	15.0
MW-4							
Screen 1	Aug/Sep 1996	--	--	--	--	--	2.6
	1 st Oct/Nov 1996	--	--	--	--	--	1.7
	Feb/Mar 1997	--	--	--	--	--	4.6
	Jun/Jul 1997	--	--	--	--	--	2.8
2 nd	Sep/Oct 1997	--	--	--	--	--	4.8
	Jan/Feb 1998	--	--	--	--	--	3.4
	Apr/May 1998	--	--	--	--	--	3.7
	Jul/Aug 1998	--	--	--	--	--	3.0
3 rd	Oct/Nov 1998	--	--	--	--	--	2.7
	Feb/Mar 1999	--	--	--	--	--	1.0
	May/Jun 1999	--	--	--	--	--	1.8
	Aug 1999	(2)	(2)	--	--	--	1.2
4 th	Nov/Dec 1999	(2)	(2)	--	--	--	4.9
	Mar/Apr 2000	(2)	(2)	--	--	--	1.5
	Jul/Aug 2000	--	--	--	--	--	8.6
	Sep/Oct 2000	(2)	(2)	--	--	--	5.0
Screen 2	Aug/Sep 1996	--	--	0.023	--	--	3.8
	1 st Oct/Nov 1996	--	--	0.014	--	--	4.2
	Feb/Mar 1997	--	--	0.011	--	--	4.5
	Jun/Jul 1997	--	--	0.013	--	--	2.7
2 nd	Sep/Oct 1997	--	--	0.012	--	--	3.5
	Jan/Feb 1998	--	--	--	--	--	4.8
	Apr/May 1998	--	--	--	--	--	1.8
	Jul/Aug 1998	--	--	0.011	--	--	4.9
3 rd	Oct/Nov 1998	--	--	0.010	--	--	3.4
	Feb/Mar 1999	--	--	--	--	--	6.1
	May/Jun 1999	--	--	--	--	--	4.8
	Aug 1999	(2)	(2)	0.010	--	--	3.8
4 th	Nov/Dec 1999	(2)	(2)	--	--	--	4.9
	Mar/Apr 2000	(2)	(2)	--	--	--	5.7
	Jul/Aug 2000	--	--	0.014	--	--	7.0
	Sep/Oct 2000	(2)	(2)	0.025	--	--	17.8
Screen 3	Aug/Sep 1996	--	--	--	--	--	0.6
	1 st Oct/Nov 1996	--	--	--	--	--	1.5
	Feb/Mar 1997	--	--	--	--	--	2.8
	Jun/Jul 1997	--	--	--	--	--	2.0

TABLE 3-2

**SUMMARY OF METALS DETECTED DURING
THE FIRST 4 YEARS OF LONG-TERM
QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY**

(concentrations in mg/L)

Values above state or Federal MCLs, or above/equal to action levels, are bold and shaded
(see final page of Table for MCLs and notes)

Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
Screen 4	2 nd	Sep/Oct 1997	--	--	--	--	1.4
		Jan/Feb 1998	--	--	--	--	4.6
		Apr/May 1998	--	--	--	--	3.2
		Jul/Aug 1998	--	--	--	--	3.9
	3 rd	Oct/Nov 1998	--	--	--	--	1.2
		Feb/Mar 1999	--	--	--	--	2.9
		May/Jun 1999	--	--	--	--	4.9
		Aug 1999	(2)	(2)	--	--	2.1
	4 th	Nov/Dec 1999	(2)	(2)	--	--	3.0
		Mar/Apr 2000	(2)	(2)	--	--	8.4
		Jul/Aug 2000	--	--	--	--	9.6
		Sep/Oct 2000	(2)	(2)	--	--	16.1
Screen 5	1 st	Aug/Sep 1996	--	--	--	--	3.0
		Oct/Nov 1996	--	--	--	--	1.4
		Feb/Mar 1997	--	--	--	--	2.5
		Jun/Jul 1997	--	--	--	--	4.6
	2 nd	Sep/Oct 1997	--	--	--	--	3.3
		Jan/Feb 1998	--	--	--	--	4.7
		Apr/May 1998	--	--	--	--	2.0
		Jul/Aug 1998	--	--	0.007	--	3.6
	3 rd	Oct/Nov 1998	--	--	--	--	2.7
		Feb/Mar 1999	--	--	--	--	3.3
		May/Jun 1999	--	--	--	--	2.9
		Aug 1999	(2)	(2)	--	--	1.2
	4 th	Nov/Dec 1999	(2)	(2)	--	--	1.9
		Mar/Apr 2000	(2)	(2)	--	--	1.0
		Jul/Aug 2000	--	--	--	--	5.3
		Sep/Oct 2000	(2)	(2)	--	--	6.5

TABLE 3-2

**SUMMARY OF METALS DETECTED DURING
THE FIRST 4 YEARS OF LONG-TERM
QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY**
(concentrations in mg/L)

Values above state or Federal MCLs, or above/equal to action levels, are bold and shaded
(see final page of Table for MCLs and notes)

Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
MW-5	1 st	Aug/Sep 1996	--	--	--	--	2.7
		Oct/Nov 1996	--	0.003	--	--	2.7
		Feb/Mar 1997	--	--	--	--	1.5
		Jun/Jul 1997	--	--	--	--	4.5
	2 nd	Sep/Oct 1997	--	--	--	--	1.0
		Jan/Feb 1998	--	--	--	--	0.9
		Apr/May 1998	--	--	--	--	3.1
		Jul/Aug 1998	--	--	--	--	4.6
	3 rd	Oct/Nov 1998	--	--	--	--	4.2
		Feb/Mar 1999	--	--	--	--	7.9
		May/Jun 1999	--	--	--	--	1.7
		Aug 1999	(2)	(2)	--	--	4.3
	4 th	Nov/Dec 1999	(2)	(2)	--	--	3.6
		Mar/Apr 2000	(2)	(2)	--	--	0.2
		Jul/Aug 2000	--	--	--	--	1.3
		Sep/Oct 2000	(2)	(2)	--	--	0.7
MW-6	1 st	Aug/Sep 1996	--	--	0.050	--	4.5
		Oct/Nov 1996	--	--	0.011	--	1.1
		Feb/Mar 1997	--	--	0.014	--	4.3
		Jun/Jul 1997	--	--	0.019	--	2.5
	2 nd	Sep/Oct 1997	--	--	--	--	1.8
		Jan/Feb 1998	--	--	--	--	0.4
		Apr/May 1998	--	--	0.012	--	2.1
		Jul/Aug 1998	--	--	0.013	--	3.0
	3 rd	Oct/Nov 1998	--	--	0.037	--	3.8
		Feb/Mar 1999	--	--	0.017	--	2.7
		May/Jun 1999	--	--	0.036	--	4.1
		Aug 1999	(2)	(2)	0.31 ⁽³⁾	--	2.7
	4 th	Nov/Dec 1999	(2)	(2)	0.012	--	2.2
		Mar/Apr 2000	(2)	(2)	0.082	--	3.9
		Jul/Aug 2000	--	--	0.051	--	10.5
		Sep/Oct 2000	(2)	(2)	0.022	--	4.4
MW-7	1 st	Aug/Sep 1996	--	--	0.013	0.007	4.8
		Oct/Nov 1996	--	--	0.019	0.019	3.5
		Feb/Mar 1997	--	--	--	0.010	2.2
		Jun/Jul 1997	--	--	--	--	1.0
	2 nd	Sep/Oct 1997	--	--	0.018	--	0.8
		Jan/Feb 1998	--	--	0.012	--	1.2
		Apr/May 1998	--	--	--	--	4.1
		Jul/Aug 1998	--	--	--	--	4.7
	3 rd	Oct/Nov 1998	--	--	--	--	1.2
		Feb/Mar 1999	--	--	--	--	4.3
		May/Jun 1999	--	--	0.011	--	3.5
		Aug 1999	(2)	(2)	--	0.005	3.1

TABLE 3-2

**SUMMARY OF METALS DETECTED DURING
THE FIRST 4 YEARS OF LONG-TERM
QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY**
(concentrations in mg/L)

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Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
MW-8	4 th	Nov/Dec 1999	(2)	(2)	0.010	0.007	1.0
		Mar/Apr 2000	(2)	(2)	0.012	0.008	1.3
		Jul/Aug 2000	--	--	0.014	--	30.0
		Sep/Oct 2000	(2,4)	(2,4)	(4)	(4)	(4)
MW-9	1 st	Aug/Sep 1996	--	--	--	--	4.0
		Oct/Nov 1996	--	0.003	--	--	4.7
		Feb/Mar 1997	--	--	--	--	3.1
		Jun/Jul 1997	--	0.002	--	--	4.6
	2 nd	Sep/Oct 1997	--	--	--	--	4.2
		Jan/Feb 1998	--	--	--	--	3.4
		Apr/May 1998	--	--	0.013	--	2.6
		Jul/Aug 1998	--	--	--	--	1.2
	3 rd	Oct/Nov 1998	--	--	--	--	3.7
		Feb/Mar 1999	--	--	--	--	1.5
		May/Jun 1999	--	--	--	--	1.5
		Aug 1999	(2)	(2)	0.014	--	0.7
	4 th	Nov/Dec 1999	(2)	(2)	--	--	4.6
		Mar/Apr 2000	(2)	(2)	--	--	1.3
		Jul/Aug 2000	--	--	0.016	--	5.3
		Sep/Oct 2000	(2)	(2)	--	--	3.8
MW-10	1 st	Aug/Sep 1996	--	--	--	--	2.1
		Oct/Nov 1996	--	--	--	--	2.5
		Feb/Mar 1997	--	--	--	--	4.2
		Jun/Jul 1997	--	--	--	--	3.2
	2 nd	Sep/Oct 1997	--	--	--	--	1.0
		Jan/Feb 1998	--	--	--	--	2.4
		Apr/May 1998	--	--	--	--	1.3
		Jul/Aug 1998	--	--	--	--	3.0
	3 rd	Oct/Nov 1998	--	--	--	--	2.1
		Feb/Mar 1999	--	--	--	--	2.8
		May/Jun 1999	--	--	--	--	0.1
		Aug 1999	(2)	(2)	(2)	(2)	(2)
	4 th	Nov/Dec 1999	(2)	(2)	--	--	4.6
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)
		Jul/Aug 2000	--	--	--	--	2.3
		Sep/Oct 2000	(2)	(2)	(2)	(2)	(2)

TABLE 3-2

**SUMMARY OF METALS DETECTED DURING
THE FIRST 4 YEARS OF LONG-TERM
QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY**

(concentrations in mg/L)

Values above state or Federal MCLs, or above/equal to action levels, are bold and shaded
(see final page of Table for MCLs and notes)

Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
3 rd	Oct/Nov 1998	--	--	--	--	--	3.6
	Feb/Mar 1999	--	--	--	0.014	--	3.3
	May/Jun 1999	--	--	--	--	--	1.8
	Aug 1999	(2)	(2)	--	--	--	3.6
4 th	Nov/Dec 1999	(2)	(2)	0.026	--	--	4.7
	Mar/Apr 2000	(2)	(2)	0.041	--	--	9.1
	Jul/Aug 2000	--	--	0.012 ⁽⁵⁾	--	--	1.8
	Sep/Oct 2000	(2)	(2)	0.029	--	--	2.9
MW-II							
Screen 1	Aug/Sep 1996	--	--	--	--	--	4.0
	Oct/Nov 1996	--	--	--	--	--	2.5
	Feb/Mar 1997	--	--	--	--	--	2.5
	Jun/Jul 1997	--	--	--	--	--	1.5
2 nd	Sep/Oct 1997	--	--	--	--	--	4.6
	Jan/Feb 1998	--	--	--	--	--	1.0
	Apr/May 1998	--	--	--	--	--	1.0
	Jul/Aug 1998	--	--	--	--	--	4.6
3 rd	Oct/Nov 1998	--	--	--	--	--	1.4
	Feb/Mar 1999	--	--	--	--	--	1.6
	May/Jun 1999	--	--	--	--	--	1.1
	Aug 1999	(2)	(2)	--	--	--	1.2
4 th	Nov/Dec 1999	(2)	(2)	--	--	--	2.4
	Mar/Apr 2000	(2)	(2)	--	--	--	2.7
	Jul/Aug 2000	--	--	--	--	--	0.8
	Sep/Oct 2000	(2)	(2)	--	--	--	0.8
Screen 2	Aug/Sep 1996	--	--	--	--	--	4.5
	Oct/Nov 1996	--	--	--	--	--	4.7
	Feb/Mar 1997	--	--	--	--	--	3.1
	Jun/Jul 1997	--	--	--	--	--	4.7
2 nd	Sep/Oct 1997	--	--	--	--	--	3.0
	Jan/Feb 1998	--	--	--	--	--	2.4
	Apr/May 1998	--	--	--	--	--	1.4
	Jul/Aug 1998	--	--	--	--	--	3.5
3 rd	Oct/Nov 1998	--	--	--	--	--	3.7
	Feb/Mar 1999	--	--	--	--	--	12.8
	May/Jun 1999	--	--	--	--	--	1.3
	Aug 1999	(2)	(2)	--	--	--	1.9
4 th	Nov/Dec 1999	(2)	(2)	--	--	--	3.3
	Mar/Apr 2000	(2)	(2)	--	--	--	1.8
	Jul/Aug 2000	--	--	--	--	--	1.0
	Sep/Oct 2000	(2)	(2)	--	--	--	1.2
Screen 3	Aug/Sep 1996	--	--	--	--	--	0.5
	Oct/Nov 1996	--	--	--	--	--	2.3
	Feb/Mar 1997	--	--	--	--	--	1.7
	Jun/Jul 1997	--	--	--	--	--	1.9

TABLE 3-2
SUMMARY OF METALS DETECTED DURING
THE FIRST 4 YEARS OF LONG-TERM
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Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
Screen 4	2 nd	Sep/Oct 1997	--	--	--	--	3.0
		Jan/Feb 1998	--	--	--	--	1.4
		Apr/May 1998	--	--	--	--	2.1
		Jul/Aug 1998	--	--	--	--	2.6
	3 rd	Oct/Nov 1998	--	0.008	--	--	4.5
		Feb/Mar 1999	--	--	--	--	2.6
		May/Jun 1999	--	--	--	--	2.7
		Aug 1999	(2)	(2)	--	--	3.1
	4 th	Nov/Dec 1999	(2)	(2)	--	--	2.1
		Mar/Apr 2000	(2)	(2)	--	--	1.2
		Jul/Aug 2000	--	--	--	--	1.6
		Sep/Oct 2000	(2)	(2)	--	--	1.5
Screen 5	1 st	Aug/Sep 1996	--	--	--	--	3.9
		Oct/Nov 1996	--	--	--	--	3.3
		Feb/Mar 1997	--	0.009	--	--	5.2
		Jun/Jul 1997	--	--	--	--	4.8
	2 nd	Sep/Oct 1997	--	--	--	--	5.0
		Jan/Feb 1998	--	--	--	--	3.4
		Apr/May 1998	--	--	--	--	4.2
		Jul/Aug 1998	--	--	--	--	3.7
	3 rd	Oct/Nov 1998	--	--	--	--	4.5
		Feb/Mar 1999	--	--	--	--	1.4
		May/Jun 1999	--	--	--	--	4.0
		Aug 1999	(2)	(2)	(2)	(2)	3.5
	4 th	Nov/Dec 1999	(2)	(2)	--	--	2.3
		Mar/Apr 2000	(2)	(2)	(2)	(2)	1.7
		Jul/Aug 2000	--	--	--	--	1.9
		Sep/Oct 2000	(2)	(2)	(2)	(2)	1.4

TABLE 3-2

**SUMMARY OF METALS DETECTED DURING
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Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
MW-12							
Screen 1	1 st	Aug/Sep 1996	--	0.004	--	--	50.4
		Oct/Nov 1996	(6)	(6)	(6)	(6)	(6)
		Feb/Mar 1997	--	0.003	--	--	3.8
		Jun/Jul 1997	--	--	--	--	4.8
	2 nd	Sep/Oct 1997	(6)	(6)	(6)	(6)	(6)
		Jan/Feb 1998	--	--	--	--	2.6
		Apr/May 1998	--	--	0.010	--	4.8
		Jul/Aug 1998	--	--	--	--	5.0
	3 rd	Oct/Nov 1998	--	--	--	--	7.4
		Feb/Mar 1999	--	--	--	--	7.5
		May/Jun 1999	--	--	--	--	10.5
		Aug 1999	(2)	(2)	--	--	41.6
	4 th	Nov/Dec 1999	(2)	(2)	--	--	13.1
		Mar/Apr 2000	(2)	(2)	--	--	7.9
		Jul/Aug 2000	--	--	--	--	33.6
		Sep/Oct 2000	(2)	(2)	--	--	17.5
Screen 2	1 st	Aug/Sep 1996	--	0.024	--	--	4.0
		Oct/Nov 1996	--	--	--	--	4.0
		Feb/Mar 1997	--	--	--	--	2.5
		Jun/Jul 1997	--	--	--	--	3.2
	2 nd	Sep/Oct 1997	--	--	--	--	3.4
		Jan/Feb 1998	--	--	--	--	4.4
		Apr/May 1998	--	--	--	--	1.6
		Jul/Aug 1998	--	0.006	--	--	3.7
	3 rd	Oct/Nov 1998	--	--	--	--	4.9
		Feb/Mar 1999	--	--	--	--	2.5
		May/Jun 1999	--	--	--	--	1.7
		Aug 1999	(2)	(2)	--	--	1.9
	4 th	Nov/Dec 1999	(2)	(2)	--	--	1.6
		Mar/Apr 2000	(2)	(2)	--	--	0.9
		Jul/Aug 2000	--	--	--	--	1.7
		Sep/Oct 2000	(2)	(2)	--	--	1.6
Screen 3	1 st	Aug/Sep 1996	--	--	--	--	2.5
		Oct/Nov 1996	--	--	--	--	3.1
		Feb/Mar 1997	--	--	--	--	5.0
		Jun/Jul 1997	--	--	--	--	4.8
	2 nd	Sep/Oct 1997	--	--	--	--	4.2
		Jan/Feb 1998	--	--	--	--	2.8
		Apr/May 1998	--	--	--	--	4.4
		Jul/Aug 1998	--	0.018	--	--	3.2
	3 rd	Oct/Nov 1998	--	--	--	--	4.2
		Feb/Mar 1999	--	--	--	--	4.6
		May/Jun 1999	--	--	--	--	0.8
		Aug 1999	(2)	(2)	--	--	0.4

TABLE 3-2

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Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
Screen 4	4 th	Nov/Dec 1999	(2)	(2)	--	--	0.4
		Mar/Apr 2000	(2)	(2)	--	--	0.8
		Jul/Aug 2000	--	--	--	--	0.4
		Sep/Oct 2000	(2)	(2)	--	--	1.2
Screen 4	1 st	Aug/Sep 1996	--	0.005	--	--	1.8
		Oct/Nov 1996	--	--	--	--	0.7
		Feb/Mar 1997	--	--	--	--	2.4
		Jun/Jul 1997	--	--	--	--	2.5
Screen 4	2 nd	Sep/Oct 1997	--	--	--	--	1.6
		Jan/Feb 1998	--	--	--	--	3.4
		Apr/May 1998	--	--	--	--	1.7
		Jul/Aug 1998	--	--	--	--	3.7
Screen 4	3 rd	Oct/Nov 1998	--	--	--	--	4.2
		Feb/Mar 1999	--	--	--	--	3.1
		May/Jun 1999	--	--	--	--	1.1
		Aug 1999	(2)	(2)	(2)	(2)	0.9
Screen 5	4 th	Nov/Dec 1999	(2)	(2)	--	--	3.2
		Mar/Apr 2000	(2)	(2)	(2)	(2)	0.6
		Jul/Aug 2000	--	--	--	--	0.6
		Sep/Oct 2000	(2)	(2)	(2)	(2)	1.1
Screen 5	1 st	Aug/Sep 1996	--	--	--	--	2.0
		Oct/Nov 1996	--	--	--	--	2.0
		Feb/Mar 1997	--	--	--	--	1.5
		Jun/Jul 1997	--	--	--	--	5.0
Screen 5	2 nd	Sep/Oct 1997	--	--	--	--	1.0
		Jan/Feb 1998	--	--	--	--	2.2
		Apr/May 1998	--	--	--	--	3.5
		Jul/Aug 1998	--	--	--	--	3.1
Screen 5	3 rd	Oct/Nov 1998	--	--	--	--	1.3
		Feb/Mar 1999	--	--	--	--	5.0
		May/Jun 1999	--	--	--	--	3.2
		Aug 1999	(2)	(2)	(2)	(2)	4.8
MW-13	4 th	Nov/Dec 1999	(2)	(2)	--	--	3.7
		Mar/Apr 2000	(2)	(2)	(2)	(2)	5.9
		Jul/Aug 2000	--	--	--	--	1.7
		Sep/Oct 2000	(2)	(2)	(2)	(2)	4.5
MW-13	1 st	Aug/Sep 1996	--	--	0.046	0.047	4.1
		Oct/Nov 1996	--	0.005	0.031	0.028	3.0
		Feb/Mar 1997	--	--	0.032	0.035	0.5
		Jun/Jul 1997	--	--	0.038	0.037	1.2
MW-13	2 nd	Sep/Oct 1997	--	--	0.050	0.045	2.4
		Jan/Feb 1998	--	0.003	0.040	0.036	1.0
		Apr/May 1998	--	--	0.082	0.024	3.5
		Jul/Aug 1998	--	--	0.025	0.023	1.0

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Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
MW-14	3 rd	Oct/Nov 1998	--	--	0.036	0.029	3.4
		Feb/Mar 1999	--	--	0.030	0.019	1.0
		May/Jun 1999	--	--	0.024	0.024	0.4
		Aug 1999	(2)	(2)	0.037	0.031	0.15
MW-14	4 th	Nov/Dec 1999	(2)	(2)	0.034	0.029	1.2
		Mar/Apr 2000	(2)	(2)	0.034	0.030	0.5
		Jul/Aug 2000	--	--	0.044	0.019	1.4
		Sep/Oct 2000	(2)	(2)	0.039	0.030	0.6
MW-14							
Screen 1	1 st	Aug/Sep 1996	--	--	--	--	3.3
		Oct/Nov 1996	--	--	--	--	4.5
		Feb/Mar 1997	--	--	--	--	4.3
		Jun/Jul 1997	--	--	--	--	2.2
Screen 1	2 nd	Sep/Oct 1997	--	--	--	--	3.9
		Jan/Feb 1998	--	0.004	--	--	5.0
		Apr/May 1998	--	--	0.011	--	3.1
		Jul/Aug 1998	--	--	--	--	3.8
Screen 1	3 rd	Oct/Nov 1998	--	--	--	--	4.2
		Feb/Mar 1999	--	--	--	--	4.8
		May/Jun 1999	--	--	--	--	3.4
		Aug 1999	(2)	(2)	--	--	1.7
Screen 1	4 th	Nov/Dec 1999	(7)	(7)	(7)	(7)	(7)
		Mar/Apr 2000	(2)	(2)	--	--	1.7
		Jul/Aug 2000	--	--	--	--	2.2
		Sep/Oct 2000	(2)	(2)	--	--	0.8
Screen 2	1 st	Aug/Sep 1996	--	--	--	--	4.4
		Oct/Nov 1996	--	--	--	--	3.8
		Feb/Mar 1997	--	--	--	--	4.8
		Jun/Jul 1997	--	--	--	--	5.0
Screen 2	2 nd	Sep/Oct 1997	--	--	--	--	3.2
		Jan/Feb 1998	--	0.003	--	--	4.8
		Apr/May 1998	--	--	--	--	4.9
		Jul/Aug 1998	--	--	--	--	4.8
Screen 2	3 rd	Oct/Nov 1998	--	--	--	--	4.3
		Feb/Mar 1999	--	--	--	--	4.7
		May/Jun 1999	--	--	--	--	4.4
		Aug 1999	(2)	(2)	--	--	2.8
Screen 2	4 th	Nov/Dec 1999	(2)	(2)	--	--	4.6
		Mar/Apr 2000	(2)	(2)	--	--	1.9
		Jul/Aug 2000	--	--	--	--	3.4
		Sep/Oct 2000	(2)	(2)	--	--	4.5
Screen 3	1 st	Aug/Sep 1996	--	--	--	--	1.7
		Oct/Nov 1996	--	--	--	--	2.0
		Feb/Mar 1997	--	--	--	--	2.5
		Jun/Jul 1997	--	--	--	--	0.7

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Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
Screen 4	2 nd	Sep/Oct 1997	--	--	--	--	2.9
		Jan/Feb 1998	--	0.003	0.026	--	2.1
		Apr/May 1998	--	--	--	--	1.4
		Jul/Aug 1998	--	--	--	--	3.1
	3 rd	Oct/Nov 1998	--	--	--	--	0.8
		Feb/Mar 1999	--	--	--	--	0.7
		May/Jun 1999	--	--	--	--	0.8
		Aug 1999	(2)	(2)	--	--	2.2
	4 th	Nov/Dec 1999	(2)	(2)	--	--	0.7
		Mar/Apr 2000	(2)	(2)	--	--	0.6
		Jul/Aug 2000	--	--	--	--	0.2
		Sep/Oct 2000	(2)	(2)	--	--	0.6
Screen 5	1 st	Aug/Sep 1996	--	--	--	--	3.1
		Oct/Nov 1996	--	--	--	--	2.5
		Feb/Mar 1997	--	--	--	--	4.1
		Jun/Jul 1997	--	--	--	--	2.3
	2 nd	Sep/Oct 1997	--	--	--	--	1.7
		Jan/Feb 1998	--	0.002	--	--	2.7
		Apr/May 1998	--	--	--	--	1.3
		Jul/Aug 1998	--	--	--	--	1.0
	3 rd	Oct/Nov 1998	--	--	--	--	2.3
		Feb/Mar 1999	--	--	--	--	2.1
		May/Jun 1999	--	--	--	--	1.7
		Aug 1999	(2)	(2)	--	--	1.2
	4 th	Nov/Dec 1999	(2)	(2)	--	--	1.2
		Mar/Apr 2000	(2)	(2)	--	--	1.3
		Jul/Aug 2000	--	--	--	--	0.2
		Sep/Oct 2000	(2)	(2)	--	--	0.3
	1 st	Aug/Sep 1996	--	--	--	--	1.5
		Oct/Nov 1996	--	--	--	--	4.1
		Feb/Mar 1997	--	0.028	--	--	2.3
		Jun/Jul 1997	--	--	--	--	1.9
	2 nd	Sep/Oct 1997	--	--	--	--	3.8
		Jan/Feb 1998	--	--	--	--	4.7
		Apr/May 1998	--	--	--	--	1.9
		Jul/Aug 1998	--	--	--	--	2.4
	3 rd	Oct/Nov 1998	--	--	--	--	4.5
		Feb/Mar 1999	--	--	--	--	4.2
		May/Jun 1999	--	--	--	--	1.9
		Aug 1999	(2)	(2)	(2)	(2)	1.4
	4 th	Nov/Dec 1999	(2)	(2)	--	--	3.6
		Mar/Apr 2000	(2)	(2)	(2)	(2)	3.2
		Jul/Aug 2000	--	--	--	--	2.9
		Sep/Oct 2000	(2)	(2)	(2)	(2)	2.7

TABLE 3-2

**SUMMARY OF METALS DETECTED DURING
THE FIRST 4 YEARS OF LONG-TERM
QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY**

(concentrations in mg/L)

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Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
MW-15	1 st	Aug/Sep 1996	--	--	--	--	1.3
		Oct/Nov 1996	--	--	NS	--	0.5
		Feb/Mar 1997	--	--	--	--	2.6
		Jun/Jul 1997	--	--	--	--	0.2
	2 nd	Sep/Oct 1997	--	--	--	--	0.9
		Jan/Feb 1998	--	--	--	--	1.4
		Apr/May 1998	--	--	--	--	0.4
		Jul/Aug 1998	--	--	--	--	3.0
	3 rd	Oct/Nov 1998	--	--	--	--	2.0
		Feb/Mar 1999	--	--	--	--	0.6
		May/Jun 1999	--	--	--	--	0.4
		Aug 1999	(2)	(2)	(2)	(2)	(2)
	4 th	Nov/Dec 1999	(2)	(2)	--	--	0.3
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)
		Jul/Aug 2000	--	--	--	--	0.4
		Sep/Oct 2000	(2)	(2)	(2)	(2)	(2)
MW-16	1 st	Aug/Sep 1996	--	--	0.018	--	3.4
		Oct/Nov 1996	(6)	(6)	(6)	(6)	1.4
		Feb/Mar 1997	--	--	--	0.007	0.2
		Jun/Jul 1997	--	--	--	--	0.1
	2 nd	Sep/Oct 1997	(6)	(6)	(6)	(6)	1.4
		Jan/Feb 1998	--	--	--	--	1.1
		Apr/May 1998	--	--	0.014	--	1.4
		Jul/Aug 1998	--	--	--	--	1.9
	3 rd	Oct/Nov 1998	--	--	0.013	--	0.9
		Feb/Mar 1999	--	--	0.013	0.007	1.0
		May/Jun 1999	--	--	--	--	2.2
		Aug 1999	(2)	(2)	--	0.007	0.5
	4 th	Nov/Dec 1999	(2)	(2)	--	0.006	1.9
		Mar/Apr 2000	(2)	(2)	--	--	0.1
		Jul/Aug 2000	--	--	--	0.006	0.2
		Sep/Oct 2000	(2)	(2)	--	--	0.1
MW-17	Screen 1	Aug/Sep 1996	--	--	NS	NS	1.0
		Oct/Nov 1996	--	--	--	--	2.9
		Feb/Mar 1997	--	--	--	--	2.0
		Jun/Jul 1997	--	--	--	--	2.2
	2 nd	Sep/Oct 1997	--	--	--	--	1.3
		Jan/Feb 1998	--	--	--	--	5.0
		Apr/May 1998	--	--	--	--	1.7
		Jul/Aug 1998	--	--	--	--	1.5

TABLE 3-2

**SUMMARY OF METALS DETECTED DURING
THE FIRST 4 YEARS OF LONG-TERM
QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY**
(concentrations in mg/L)

Values above state or Federal MCLs, or above/equal to action levels, are bold and shaded
(see final page of Table for MCLs and notes)

Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
Screen 2	3 rd	Oct/Nov 1998	--	--	--	--	0.5
		Feb/Mar 1999	--	--	--	--	1.5
		May/Jun 1999	--	--	--	--	0.4
		Aug 1999	(2)	(2)	(2)	(2)	(2)
	4 th	Nov/Dec 1999	(2)	(2)	--	--	1.2
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)
		Jul/Aug 2000	--	--	--	--	1.5
		Sep/Oct 2000	(2)	(2)	(2)	(2)	(2)
	1 st	Aug/Sep 1996	--	--	NS	NS	4.5
		Oct/Nov 1996	--	--	--	--	2.5
		Feb/Mar 1997	--	--	--	--	2.7
		Jun/Jul 1997	--	--	--	--	4.5
	2 nd	Sep/Oct 1997	--	--	--	--	1.2
		Jan/Feb 1998	--	--	--	--	0.8
		Apr/May 1998	--	--	--	--	2.2
		Jul/Aug 1998	--	0.007	--	--	1.0
	3 rd	Oct/Nov 1998	--	--	--	--	1.7
		Feb/Mar 1999	--	--	--	--	1.1
		May/Jun 1999	--	--	--	--	1.6
		Aug 1999	(2)	(2)	--	--	12.4
	4 th	Nov/Dec 1999	(2)	(2)	--	--	3.1
		Mar/Apr 2000	(2)	(2)	--	--	2.0
		Jul/Aug 2000	--	--	--	--	1.3
		Sep/Oct 2000	(2)	(2)	--	--	1.7
	Screen 3	Aug/Sep 1996	--	0.002	NS	NS	4.9
		Oct/Nov 1996	--	--	--	--	4.8
		Feb/Mar 1997	--	--	--	--	6.0
		Jun/Jul 1997	--	--	--	--	4.8
	2 nd	Sep/Oct 1997	--	--	--	0.006	2.5
		Jan/Feb 1998	--	--	--	--	3.2
		Apr/May 1998	--	--	--	--	3.6
		Jul/Aug 1998	--	--	--	--	4.0
	3 rd	Oct/Nov 1998	--	--	--	--	4.4
		Feb/Mar 1999	--	--	--	--	6.3
		May/Jun 1999	--	--	--	--	2.2
		Aug 1999	(2)	(2)	--	--	2.5
	4 th	Nov/Dec 1999	(2)	(2)	--	--	4.6
		Mar/Apr 2000	(2)	(2)	--	--	3.6
		Jul/Aug 2000	--	--	--	--	1.8
		Sep/Oct 2000	(2)	(2)	--	--	8.0
	Screen 4	Aug/Sep 1996	--	--	NS	NS	2.8
		Oct/Nov 1996	--	--	--	--	2.6
		Feb/Mar 1997	--	--	--	--	5.6
		Jun/Jul 1997	--	--	--	--	4.1

TABLE 3-2

**SUMMARY OF METALS DETECTED DURING
THE FIRST 4 YEARS OF LONG-TERM
QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY**
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Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
Screen 5	2 nd	Sep/Oct 1997	--	--	--	--	3.6
		Jan/Feb 1998	--	--	--	--	3.9
		Apr/May 1998	--	--	--	--	3.7
		Jul/Aug 1998	--	--	--	--	4.4
	3 rd	Oct/Nov 1998	--	--	--	--	1.8
		Feb/Mar 1999	--	--	--	--	4.8
		May/Jun 1999	--	--	--	--	7.9
		Aug 1999	(2)	(2)	--	--	4.1
	4 th	Nov/Dec 1999	(2)	(2)	--	--	4.9
		Mar/Apr 2000	(2)	(2)	--	--	10.0
		Jul/Aug 2000	--	--	--	--	1.4
		Sep/Oct 2000	(2)	(2)	--	--	3.2
MW-18	1 st	Aug/Sep 1996	--	--	NS	NS	5.0
		Oct/Nov 1996	--	0.005	--	--	5.2
		Feb/Mar 1997	--	0.003	--	--	25
		Jun/Jul 1997	--	--	--	--	34
	2 nd	Sep/Oct 1997	--	--	--	--	4.8
		Jan/Feb 1998	--	--	--	--	4.8
		Apr/May 1998	--	0.002	--	--	3.7
		Jul/Aug 1998	--	--	--	--	4.8
	3 rd	Oct/Nov 1998	--	--	--	--	5.1
		Feb/Mar 1999	--	0.007	--	--	12.4
		May/Jun 1999	--	0.004	--	--	16.3
		Aug 1999	(2)	(2)	(2)	(2)	2.4
	4 th	Nov/Dec 1999	(2)	(2)	--	--	4.4
		Mar/Apr 2000	(2)	(2)	(2)	(2)	80.0
		Jul/Aug 2000	--	--	--	--	4.4
		Sep/Oct 2000	(2)	(2)	(2)	(2)	9.2

TABLE 3-2

**SUMMARY OF METALS DETECTED DURING
THE FIRST 4 YEARS OF LONG-TERM
QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY**
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Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
Screen 2	1 st	Aug/Sep 1996	--	--	NS	NS	3.5
		Oct/Nov 1996	--	0.003	--	--	3.4
		Feb/Mar 1997	--	--	--	--	2.8
		Jun/Jul 1997	--	--	--	--	1.5
	2 nd	Sep/Oct 1997	--	--	--	--	1.4
		Jan/Feb 1998	--	--	--	--	3.6
		Apr/May 1998	--	--	--	--	0.1
		Jul/Aug 1998	--	--	--	--	3.1
	3 rd	Oct/Nov 1998	--	--	--	--	1.9
		Feb/Mar 1999	--	0.005	--	--	2.7
		May/Jun 1999	--	--	--	--	4.1
		Aug 1999	(2)	(2)	--	--	1.0
	4 th	Nov/Dec 1999	(2)	(2)	--	--	4.0
		Mar/Apr 2000	(2)	(2)	--	--	1.8
		Jul/Aug 2000	--	--	--	--	2.1
		Sep/Oct 2000	(2)	(2)	--	--	4.0
Screen 3	1 st	Aug/Sep 1996	--	--	NS	NS	4.2
		Oct/Nov 1996	--	0.002	NS	--	4.0
		Feb/Mar 1997	--	--	0.015	0.007	3.3
		Jun/Jul 1997	--	--	--	--	3.9
	2 nd	Sep/Oct 1997	--	--	--	--	2.1
		Jan/Feb 1998	--	--	--	--	0.6
		Apr/May 1998	--	--	0.012	0.007	0.04
		Jul/Aug 1998	--	--	0.014	--	2.3
	3 rd	Oct/Nov 1998	--	--	--	--	1.7
		Feb/Mar 1999	--	--	--	0.007	1.2
		May/Jun 1999	--	--	--	--	2.1
		Aug 1999	(2)	(2)	--	--	0.8
	4 th	Nov/Dec 1999	(2)	(2)	--	--	0.7
		Mar/Apr 2000	(2)	(2)	--	--	0.2
		Jul/Aug 2000	--	--	--	--	0.1
		Sep/Oct 2000	(2)	(2)	--	--	0.8
Screen 4	1 st	Aug/Sep 1996	--	--	NS	NS	2.0
		Oct/Nov 1996	--	0.003	--	--	1.9
		Feb/Mar 1997	--	--	--	--	2.8
		Jun/Jul 1997	0.005	--	--	--	3.6
	2 nd	Sep/Oct 1997	--	--	--	--	1.1
		Jan/Feb 1998	--	--	--	--	2.2
		Apr/May 1998	--	--	--	--	0.04
		Jul/Aug 1998	--	--	--	--	2.5
	3 rd	Oct/Nov 1998	--	--	--	--	4.6
		Feb/Mar 1999	--	--	--	--	2.7
		May/Jun 1999	--	--	--	--	3.0
		Aug 1999	(2)	(2)	--	--	0.7

TABLE 3-2

**SUMMARY OF METALS DETECTED DURING
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Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
Screen 5	4 th	Nov/Dec 1999	(2)	(2)	--	--	1.4
		Mar/Apr 2000	(2)	(2)	--	--	2.3
		Jul/Aug 2000	--	--	--	--	0.4
		Sep/Oct 2000	(2)	(2)	--	--	0.9
Screen 5	1 st	Aug/Sep 1996	--	--	NS	NS	2.8
		Oct/Nov 1996	--	0.002	--	--	3.6
		Feb/Mar 1997	--	--	--	--	2.9
		Jun/Jul 1997	--	--	--	--	4.0
Screen 5	2 nd	Sep/Oct 1997	--	--	--	--	1.7
		Jan/Feb 1998	--	--	--	--	1.6
		Apr/May 1998	--	--	--	--	0.1
		Jul/Aug 1998	--	--	--	--	1.1
Screen 5	3 rd	Oct/Nov 1998	--	--	--	--	2.8
		Feb/Mar 1999	--	--	--	--	2.0
		May/Jun 1999	--	--	--	--	2.4
		Aug 1999	(2)	(2)	(2)	(2)	0.6
Screen 5	4 th	Nov/Dec 1999	(2)	(2)	--	--	2.3
		Mar/Apr 2000	(2)	(2)	(2)	(2)	2.3
		Jul/Aug 2000	--	--	--	--	1.8
		Sep/Oct 2000	(2)	(2)	(2)	(2)	1.1
MW-19							
Screen 1	1 st	Aug/Sep 1996	--	--	NS	NS	5.0
		Oct/Nov 1996	--	--	--	--	3.4
		Feb/Mar 1997	--	--	--	--	6.6
		Jun/Jul 1997	--	--	--	--	0.8
Screen 1	2 nd	Sep/Oct 1997	--	--	--	--	4.6
		Jan/Feb 1998	--	--	--	--	4.7
		Apr/May 1998	--	--	--	--	2.2
		Jul/Aug 1998	--	--	--	--	4.9
Screen 1	3 rd	Oct/Nov 1998	--	--	--	--	13.0
		Feb/Mar 1999	--	--	--	--	5.0
		May/Jun 1999	--	--	--	--	5.0
		Aug 1999	(2)	(2)	(2)	(2)	1.1
Screen 1	4 th	Nov/Dec 1999	(2)	(2)	--	--	4.9
		Mar/Apr 2000	(2)	(2)	(2)	(2)	1.8
		Jul/Aug 2000	--	--	--	--	0.8
		Sep/Oct 2000	(2)	(2)	(2)	(2)	3.9
Screen 2	1 st	Aug/Sep 1996	--	--	NS	NS	4.5
		Oct/Nov 1996	--	--	--	--	3.6
		Feb/Mar 1997	--	--	--	--	22
		Jun/Jul 1997	--	--	--	--	2.8
Screen 2	2 nd	Sep/Oct 1997	--	--	--	--	4.6
		Jan/Feb 1998	--	--	--	--	4.7
		Apr/May 1998	--	--	--	--	2.3
		Jul/Aug 1998	--	--	--	--	4.9

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Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
Screen 3	3 rd	Oct/Nov 1998	--	--	--	--	4.8
		Feb/Mar 1999	--	--	--	--	3.9
		May/Jun 1999	--	--	--	--	2.3
		Aug 1999	(2)	(2)	(2)	(2)	0.1
Screen 4	4 th	Nov/Dec 1999	(2)	(2)	--	--	1.5
		Mar/Apr 2000	(2)	(2)	(2)	(2)	1.9
		Jul/Aug 2000	--	--	--	--	0.3
		Sep/Oct 2000	(2)	(2)	(2)	(2)	3.5
Screen 5	1 st	Aug/Sep 1996	--	--	NS	NS	3.0
		Oct/Nov 1996	--	--	--	--	5.0
		Feb/Mar 1997	--	--	--	--	4.9
		Jun/Jul 1997	--	--	--	--	4.9
Screen 3	2 nd	Sep/Oct 1997	--	--	--	--	2.0
		Jan/Feb 1998	--	--	--	--	4.1
		Apr/May 1998	--	--	--	--	2.4
		Jul/Aug 1998	--	--	--	--	3.9
Screen 4	3 rd	Oct/Nov 1998	--	--	--	--	3.4
		Feb/Mar 1999	--	--	--	--	4.1
		May/Jun 1999	--	--	--	--	2.5
		Aug 1999	(2)	(2)	(2)	(2)	0.2
Screen 5	4 th	Nov/Dec 1999	(2)	(2)	--	--	3.8
		Mar/Apr 2000	(2)	(2)	(2)	(2)	2.8
		Jul/Aug 2000	--	--	--	--	5.4
		Sep/Oct 2000	(2)	(2)	(2)	(2)	9.5
Screen 3	1 st	Aug/Sep 1996	--	--	NS	NS	4.2
		Oct/Nov 1996	--	--	--	--	8.0
		Feb/Mar 1997	--	0.003	--	--	16
		Jun/Jul 1997	--	--	--	--	4.9
Screen 4	2 nd	Sep/Oct 1997	--	--	--	--	4.8
		Jan/Feb 1998	--	--	--	--	4.8
		Apr/May 1998	--	--	--	--	4.8
		Jul/Aug 1998	--	--	--	--	4.6
Screen 5	3 rd	Oct/Nov 1998	--	--	--	--	1.5
		Feb/Mar 1999	--	--	--	--	4.4
		May/Jun 1999	--	--	--	--	1.7
		Aug 1999	(2)	(2)	(2)	(2)	1.0
Screen 3	4 th	Nov/Dec 1999	(2)	(2)	--	--	3.1
		Mar/Apr 2000	(2)	(2)	(2)	(2)	0.7
		Jul/Aug 2000	--	--	--	--	2.3
		Sep/Oct 2000	(2)	(2)	(2)	(2)	1.2
Screen 4	1 st	Aug/Sep 1996	--	--	NS	NS	4.9
		Oct/Nov 1996	--	--	NS	--	4.6
		Feb/Mar 1997	--	--	--	--	3.8
		Jun/Jul 1997	--	--	--	--	2.2

TABLE 3-2

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Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
2 nd	Sep/Oct 1997	--	--	--	--	--	5.0
	Jan/Feb 1998	--	--	--	--	--	4.0
	Apr/May 1998	--	--	--	--	--	4.6
	Jul/Aug 1998	--	0.010	--	--	--	4.8
3 rd	Oct/Nov 1998	--	--	--	--	--	2.5
	Feb/Mar 1999	--	--	--	--	--	4.4
	May/Jun 1999	--	--	--	--	--	1.7
	Aug 1999	(2)	(2)	(2)	(2)	(2)	0.8
4 th	Nov/Dec 1999	(2)	(2)	--	--	--	1.0
	Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	1.0
	Jul/Aug 2000	--	--	--	--	--	0.2
	Sep/Oct 2000	(2)	(2)	(2)	(2)	(2)	1.7
MW-20							
Screen 1	Aug/Sep 1996	--	--	--	NS	NS	3.5
	Oct/Nov 1996	(6)	(6)	(6)	(6)	(6)	(6)
	Feb/Mar 1997	--	--	--	--	--	2.3
	Jun/Jul 1997	--	--	--	--	--	0.2
2 nd	Sep/Oct 1997	(6)	(6)	(6)	(6)	(6)	(6)
	Jan/Feb 1998	--	--	--	--	--	3.2
	Apr/May 1998	--	--	--	--	--	2.9
	Jul/Aug 1998	--	--	--	--	--	3.2
3 rd	Oct/Nov 1998	--	--	--	--	--	1.3
	Feb/Mar 1999	--	--	--	--	--	0.5
	May/Jun 1999	--	--	--	--	--	1.1
	Aug 1999	(2)	(2)	--	--	--	3.2
4 th	Nov/Dec 1999	(2)	(2)	--	--	--	0.8
	Mar/Apr 2000	(2)	(2)	--	--	--	2.8
	Jul/Aug 2000	--	--	--	--	--	0.2
	Sep/Oct 2000	(2)	(2)	--	--	--	3.8
Screen 2	Aug/Sep 1996	--	--	NS	NS	NS	3.9
	Oct/Nov 1996	--	--	--	--	--	1.1
	Feb/Mar 1997	--	--	--	--	--	2.1
	Jun/Jul 1997	--	--	--	--	--	2.5
2 nd	Sep/Oct 1997	--	--	--	--	--	3.6
	Jan/Feb 1998	--	--	--	--	--	0.4
	Apr/May 1998	--	--	--	--	--	1.4
	Jul/Aug 1998	--	--	--	--	--	1.3
3 rd	Oct/Nov 1998	--	--	--	--	--	2.4
	Feb/Mar 1999	--	--	--	--	--	0.8
	May/Jun 1999	--	--	--	--	--	0.9
	Aug 1999	(2)	(2)	--	--	--	2.8
4 th	Nov/Dec 1999	(2)	(2)	--	--	--	0.5
	Mar/Apr 2000	(2)	(2)	--	--	--	0.4
	Jul/Aug 2000	--	--	--	--	--	0.03
	Sep/Oct 2000	(2)	(2)	--	--	--	0.4

TABLE 3-2

**SUMMARY OF METALS DETECTED DURING
THE FIRST 4 YEARS OF LONG-TERM
QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY**

(concentrations in mg/L)

Values above state or Federal MCLs, or above/equal to action levels, are bold and shaded
(see final page of Table for MCLs and notes)

Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
Screen 3	1 st	Aug/Sep 1996	--	--	NS	NS	1.7
		Oct/Nov 1996	--	--	--	--	1.6
		Feb/Mar 1997	--	--	--	--	1.9
		Jun/Jul 1997	--	--	--	--	2.1
	2 nd	Sep/Oct 1997	--	--	--	--	4.6
		Jan/Feb 1998	--	--	--	--	2.2
		Apr/May 1998	--	--	--	--	1.3
		Jul/Aug 1998	--	--	--	--	0.7
	3 rd	Oct/Nov 1998	--	--	--	--	2.7
		Feb/Mar 1999	--	0.009	--	--	0.1
		May/Jun 1999	--	--	--	--	1.0
		Aug 1999	(2)	(2)	--	--	0.7
	4 th	Nov/Dec 1999	(2)	(2)	--	--	0.3
		Mar/Apr 2000	(2)	(2)	--	--	0.3
		Jul/Aug 2000	--	--	--	--	0.1
		Sep/Oct 2000	(2)	(2)	--	--	0.4
Screen 4	1 st	Aug/Sep 1996	--	--	NS	NS	1.0
		Oct/Nov 1996	--	--	--	--	1.3
		Feb/Mar 1997	--	--	--	--	3.3
		Jun/Jul 1997	--	--	--	--	1.3
	2 nd	Sep/Oct 1997	--	--	--	--	1.4
		Jan/Feb 1998	--	--	--	--	0.6
		Apr/May 1998	--	--	--	--	1.7
		Jul/Aug 1998	--	--	--	--	2.1
	3 rd	Oct/Nov 1998	--	--	--	--	2.6
		Feb/Mar 1999	--	--	--	--	0.8
		May/Jun 1999	--	--	--	--	2.4
		Aug 1999	(2)	(2)	--	--	0.3
	4 th	Nov/Dec 1999	(2)	(2)	--	--	2.3
		Mar/Apr 2000	(2)	(2)	--	--	1.1
		Jul/Aug 2000	--	--	--	--	1.6
		Sep/Oct 2000	(2)	(2)	--	--	2.3
Screen 5	1 st	Aug/Sep 1996	--	--	NS	NS	1.8
		Oct/Nov 1996	--	--	NS	--	1.3
		Feb/Mar 1997	--	0.004	--	--	1.6
		Jun/Jul 1997	0.006	--	--	--	1.9
	2 nd	Sep/Oct 1997	--	--	--	--	3.5
		Jan/Feb 1998	--	--	--	--	0.1
		Apr/May 1998	--	--	--	--	1.1
		Jul/Aug 1998	--	--	--	--	3.3
	3 rd	Oct/Nov 1998	--	--	--	--	1.6
		Feb/Mar 1999	--	--	--	--	1.0
		May/Jun 1999	--	--	--	--	2.7
		Aug 1999	(2)	(2)	--	--	1.7

TABLE 3-2

**SUMMARY OF METALS DETECTED DURING
THE FIRST 4 YEARS OF LONG-TERM
QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY**

(concentrations in mg/L)

Values above state or Federal MCLs, or above/equal to action levels, are bold and shaded
(see final page of Table for MCLs and notes)

Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
4 th	4 th	Nov/Dec 1999	(2)	(2)	--	--	1.1
		Mar/Apr 2000	(2)	(2)	--	--	0.4
		Jul/Aug 2000	--	--	--	--	2.3
		Sep/Oct 2000	(2)	(2)	--	--	1.4
MW-21							
Screen 1	1 st	Aug/Sep 1996	--	--	NS	NS	0.9
		Oct/Nov 1996	(6)	(6)	(6)	(6)	(6)
		Feb/Mar 1997	--	--	--	--	1.1
		Jun/Jul 1997	--	--	--	--	2.8
3 rd	2 nd	Sep/Oct 1997	(6)	(6)	(6)	(6)	(6)
		Jan/Feb 1998	--	--	--	--	0.8
		Apr/May 1998	--	--	--	--	0.7
		Jul/Aug 1998	--	--	--	--	3.4
4 th	3 rd	Oct/Nov 1998	--	--	--	--	2.2
		Feb/Mar 1999	--	--	--	--	0.3
		May/Jun 1999	--	--	--	--	2.8
		Aug 1999	(2)	(2)	(2)	(2)	1.1
Screen 2	1 st	Nov/Dec 1999	(2)	(2)	--	--	0.6
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(9)
		Jul/Aug 2000	--	--	--	--	0.2
		Sep/Oct 2000	(2)	(2)	(2)	(2)	0.6
2 nd	2 nd	Aug/Sep 1996	--	--	NS	NS	2.1
		Oct/Nov 1996	--	--	--	--	1.2
		Feb/Mar 1997	--	--	--	--	3.9
		Jun/Jul 1997	--	--	--	--	1.7
3 rd	2 nd	Sep/Oct 1997	--	--	--	--	0.8
		Jan/Feb 1998	--	--	--	--	0.6
		Apr/May 1998	--	--	--	--	1.8
		Jul/Aug 1998	--	--	--	--	3.9
4 th	3 rd	Oct/Nov 1998	--	--	--	--	3.5
		Feb/Mar 1999	--	--	--	--	0.04
		May/Jun 1999	--	--	--	--	0.8
		Aug 1999	(2)	(2)	(2)	(2)	1.6
Screen 3	1 st	Nov/Dec 1999	(2)	(2)	--	--	2.1
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(9)
		Jul/Aug 2000	--	--	--	--	0.8
		Sep/Oct 2000	(2)	(2)	(2)	(2)	0.5
2 nd	2 nd	Aug/Sep 1996	--	--	NS	NS	4.6
		Oct/Nov 1996	--	--	--	--	4.9
		Feb/Mar 1997	--	0.003	--	--	4.6
		Jun/Jul 1997	--	--	--	--	1.4
3 rd	2 nd	Sep/Oct 1997	--	--	--	--	3.2
		Jan/Feb 1998	--	0.003	--	--	4.8
		Apr/May 1998	--	--	--	--	4.1
		Jul/Aug 1998	--	--	--	--	4.8

TABLE 3-2

**SUMMARY OF METALS DETECTED DURING
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QUARTERLY GROUNDWATER MONITORING,
JET PROPULSION LABORATORY**

(concentrations in mg/L)

Values above state or Federal MCLs, or above/equal to action levels, are bold and shaded
(see final page of Table for MCLs and notes)

Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
Screen 4	3 rd	Oct/Nov 1998	--	--	--	--	4.8
		Feb/Mar 1999	--	--	--	--	4.2
		May/Jun 1999	--	--	--	--	2.2
		Aug 1999	(2)	(2)	(2)	(2)	1.9
	4 th	Nov/Dec 1999	(2)	(2)	--	--	2.6
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(9)
		Jul/Aug 2000	--	--	--	--	1.2
		Sep/Oct 2000	(2)	(2)	(2)	(2)	1.9
	1 st	Aug/Sep 1996	--	--	NS	NS	2.5
		Oct/Nov 1996	--	--	--	--	3.3
		Feb/Mar 1997	--	0.004	--	--	4.4
		Jun/Jul 1997	--	--	--	--	2.5
	2 nd	Sep/Oct 1997	--	--	--	--	4.5
		Jan/Feb 1998	--	--	--	--	1.1
		Apr/May 1998	--	--	--	--	4.6
		Jul/Aug 1998	--	--	--	--	2.4
	3 rd	Oct/Nov 1998	--	--	--	--	4.4
		Feb/Mar 1999	--	--	--	--	13.1
		May/Jun 1999	--	--	--	--	7.6
		Aug 1999	(2)	(2)	(2)	(2)	0.5
	4 th	Nov/Dec 1999	(2)	(2)	--	--	2.8
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(9)
		Jul/Aug 2000	--	--	--	--	6.2
		Sep/Oct 2000	(2)	(2)	(2)	(2)	7.7
	Screen 5	Aug/Sep 1996	--	--	NS	NS	4.9
		Oct/Nov 1996	--	--	--	--	5.0
		Feb/Mar 1997	--	--	--	--	28
		Jun/Jul 1997	--	--	--	--	26
	2 nd	Sep/Oct 1997	--	--	--	--	12
		Jan/Feb 1998	--	--	--	--	4.9
		Apr/May 1998	--	--	--	--	4.6
		Jul/Aug 1998	--	--	--	--	4.2
	3 rd	Oct/Nov 1998	--	--	--	--	14.0
		Feb/Mar 1999	--	--	--	--	4.3
		May/Jun 1999	--	--	--	--	3.3
		Aug 1999	(2)	(2)	(2)	(2)	1.9
	4 th	Nov/Dec 1999	(2)	(2)	--	--	4.8
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(9)
		Jul/Aug 2000	--	--	--	--	3.0
		Sep/Oct 2000	(2)	(2)	(2)	(2)	9.6
MW-22⁽⁸⁾							
Screen 1	2 nd	Sep/Oct 1997	--	--	--	--	34
		Jan/Feb 1998	--	--	--	--	4.5
		Apr/May 1998	--	--	--	--	4.6
		Jul/Aug 1998	--	--	--	--	4.8

TABLE 3-2

**SUMMARY OF METALS DETECTED DURING
THE FIRST 4 YEARS OF LONG-TERM
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JET PROPULSION LABORATORY**
(concentrations in mg/L)

Values above state or Federal MCLs, or above/equal to action levels, are bold and shaded
(see final page of Table for MCLs and notes)

Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
Screen 2	3 rd	Oct/Nov 1998	--	--	--	--	4.0
		Feb/Mar 1999	--	--	--	--	20.1
		May/Jun 1999	--	--	--	--	37.6
		Aug 1999	(2)	(2)	--	--	4.8
	4 th	Nov/Dec 1999	(2)	(2)	--	--	8.1
		Mar/Apr 2000	(2)	(2)	--	--	15.5
		Jul/Aug 2000	--	--	--	--	15.8
		Sep/Oct 2000	(2)	(2)	--	--	9.7
	2 nd	Sep/Oct 1997	--	--	--	--	4.9
		Jan/Feb 1998	--	--	--	--	4.2
		Apr/May 1998	--	--	--	--	4.7
		Jul/Aug 1998	--	--	--	--	4.4
	3 rd	Oct/Nov 1998	--	--	--	--	4.1
		Feb/Mar 1999	--	--	--	--	8.1
		May/Jun 1999	--	--	--	--	4.5
		Aug 1999	(2)	(2)	--	--	8.5
	4 th	Nov/Dec 1999	(2)	(2)	--	--	2.1
		Mar/Apr 2000	(2)	(2)	--	--	0.8
		Jul/Aug 2000	--	--	--	--	0.6
		Sep/Oct 2000	(2)	(2)	--	--	1.8
	2 nd	Sep/Oct 1997	--	--	--	--	3.0
		Jan/Feb 1998	--	--	--	--	3.8
		Apr/May 1998	--	--	--	--	2.9
		Jul/Aug 1998	--	--	--	--	4.9
	3 rd	Oct/Nov 1998	--	--	--	--	3.5
		Feb/Mar 1999	--	--	--	--	5.2
		May/Jun 1999	--	--	--	--	3.7
		Aug 1999	(2)	(2)	(2)	(2)	5.1
	4 th	Nov/Dec 1999	(2)	(2)	--	--	4.9
		Mar/Apr 2000	(2)	(2)	(2)	(2)	6.0
		Jul/Aug 2000	--	--	--	--	0.5
		Sep/Oct 2000	(2)	(2)	(2)	(2)	5.3
	2 nd	Sep/Oct 1997	--	--	--	--	2.8
		Jan/Feb 1998	--	--	--	--	3.7
		Apr/May 1998	--	--	--	--	3.0
		Jul/Aug 1998	--	--	--	--	4.0
	3 rd	Oct/Nov 1998	--	--	--	--	4.3
		Feb/Mar 1999	--	--	--	--	5.1
		May/Jun 1999	--	--	--	--	4.1
		Aug 1999	(2)	(2)	(2)	(2)	2.8
	4 th	Nov/Dec 1999	(2)	(2)	--	--	4.9
		Mar/Apr 2000	(2)	(2)	(2)	(2)	2.4
		Jul/Aug 2000	--	--	--	--	0.8
		Sep/Oct 2000	(2)	(2)	(2)	(2)	2.4

TABLE 3-2

**SUMMARY OF METALS DETECTED DURING
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QUARTERLY GROUNDWATER MONITORING,
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(concentrations in mg/L)

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Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
Screen 5	2 nd	Sep/Oct 1997	--	--	--	--	4.4
		Jan/Feb 1998	--	--	--	--	2.8
		Apr/May 1998	--	--	--	--	2.9
		Jul/Aug 1998	--	--	--	--	2.3
	3 rd	Oct/Nov 1998	--	--	--	--	3.3
		Feb/Mar 1999	--	--	--	--	2.6
		May/Jun 1999	--	--	--	--	4.7
		Aug 1999	(2)	(2)	(2)	(2)	(2)
	4 th	Nov/Dec 1999	(2)	(2)	--	--	0.6
		Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)
		Jul/Aug 2000	--	--	--	--	0.4
		Sep/Oct 2000	(2)	(2)	(2)	(2)	(2)
MW-23⁽⁸⁾							
Screen 1	2 nd	Sep/Oct 1997	--	--	--	--	3.4
		Jan/Feb 1998	--	--	--	--	4.1
		Apr/May 1998	--	--	--	--	4.5
		Jul/Aug 1998	--	--	--	--	4.0
	3 rd	Oct/Nov 1998	--	--	--	--	6.3
		Feb/Mar 1999	--	--	--	--	4.2
		May/Jun 1999	--	--	--	--	7.0
		Aug 1999	(2)	(2)	--	--	9.4
	4 th	Nov/Dec 1999	(2)	(2)	--	--	35.0
		Mar/Apr 2000	(2)	(2)	--	--	44.2
		Jul/Aug 2000	--	--	--	--	13.1
		Sep/Oct 2000	(2)	(2)	--	--	9.2
Screen 2	2 nd	Sep/Oct 1997	--	--	--	--	4.9
		Jan/Feb 1998	--	--	--	--	4.9
		Apr/May 1998	--	--	--	--	4.7
		Jul/Aug 1998	--	--	--	--	3.4
	3 rd	Oct/Nov 1998	--	--	--	--	4.1
		Feb/Mar 1999	--	--	--	--	2.5
		May/Jun 1999	--	--	--	--	7.3
		Aug 1999	(2)	(2)	--	--	1.5
	4 th	Nov/Dec 1999	(2)	(2)	--	--	1.8
		Mar/Apr 2000	(2)	(2)	--	--	1.9
		Jul/Aug 2000	--	--	--	--	1.7
		Sep/Oct 2000	(2)	(2)	--	--	1.7
Screen 3	2 nd	Sep/Oct 1997	--	--	--	--	3.0
		Jan/Feb 1998	--	--	--	--	4.6
		Apr/May 1998	--	--	--	--	4.6
		Jul/Aug 1998	--	--	--	--	4.7
	3 rd	Oct/Nov 1998	--	--	--	--	4.5
		Feb/Mar 1999	--	--	--	--	4.3
		May/Jun 1999	--	--	--	--	7.5
		Aug 1999	(2)	(2)	--	--	13.1

TABLE 3-2

**SUMMARY OF METALS DETECTED DURING
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Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
Screen 4	4 th	Nov/Dec 1999	(2)	(2)	--	--	3.0
		Mar/Apr 2000	(2)	(2)	--	--	1.6
		Jul/Aug 2000	--	--	--	--	2.7
		Sep/Oct 2000	(2)	(2)	--	--	1.2
Screen 4	2 nd	Sep/Oct 1997	--	--	--	--	4.9
		Jan/Feb 1998	--	--	--	--	4.5
		Apr/May 1998	--	--	--	--	4.9
		Jul/Aug 1998	--	--	--	--	4.6
Screen 4	3 rd	Oct/Nov 1998	--	--	--	--	4.2
		Feb/Mar 1999	--	--	--	--	5.1
		May/Jun 1999	--	--	--	--	2.0
		Aug 1999	(2)	(2)	--	--	4.2
Screen 5	4 th	Nov/Dec 1999	(2)	(2)	--	--	3.6
		Mar/Apr 2000	(2)	(2)	--	--	1.0
		Jul/Aug 2000	--	--	--	--	0.8
		Sep/Oct 2000	(2)	(2)	--	--	1.1
Screen 5	2 nd	Sep/Oct 1997	--	--	--	--	1.8
		Jan/Feb 1998	--	--	--	--	1.8
		Apr/May 1998	--	--	--	--	2.4
		Jul/Aug 1998	--	--	--	--	1.7
Screen 5	3 rd	Oct/Nov 1998	--	--	--	--	2.5
		Feb/Mar 1999	--	--	--	--	3.2
		May/Jun 1999	--	--	--	--	2.4
		Aug 1999	(2)	(2)	(2)	(2)	1.7
Screen 5	4 th	Nov/Dec 1999	(2)	(2)	--	--	1.7
		Mar/Apr 2000	(2)	(2)	(2)	(2)	3.0
		Jul/Aug 2000	--	--	--	--	1.4
		Sep/Oct 2000	(2)	(2)	(2)	(2)	1.3
MW-24⁽⁸⁾							
Screen 1	2 nd	Sep/Oct 1997	--	--	--	--	1.6
		Jan/Feb 1998	--	--	--	--	3.8
		Apr/May 1998	--	--	--	--	2.7
		Jul/Aug 1998	--	--	--	--	4.9
Screen 1	3 rd	Oct/Nov 1998	--	--	--	--	3.8
		Feb/Mar 1999	--	--	--	--	7.6
		May/Jun 1999	--	--	--	--	4.3
		Aug 1999	(2)	(2)	--	--	9.7
Screen 1	4 th	Nov/Dec 1999	(2)	(2)	--	--	1.1
		Mar/Apr 2000	(2)	(2)	--	--	3.8
		Jul/Aug 2000	--	--	--	--	0.8
		Sep/Oct 2000	(2)	(2)	--	--	14.5
Screen 2	2 nd	Sep/Oct 1997	--	--	--	--	4.4
		Jan/Feb 1998	--	--	--	--	4.9
		Apr/May 1998	--	--	--	--	4.5
		Jul/Aug 1998	--	--	--	--	4.8

TABLE 3-2

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(concentrations in mg/L)

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(see final page of Table for MCLs and notes)

Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
Screen 3	3 rd	Oct/Nov 1998	--	--	--	--	8.3
		Feb/Mar 1999	--	--	--	--	4.2
		May/Jun 1999	--	--	--	--	5.4
		Aug 1999	(2)	(2)	--	--	33.8
Screen 3	4 th	Nov/Dec 1999	(2)	(2)	--	--	23.8
		Mar/Apr 2000	(2)	(2)	--	--	19.2
		Jul/Aug 2000	--	--	--	--	14.1
		Sep/Oct 2000	(2)	(2)	--	--	13.4
Screen 4	2 nd	Sep/Oct 1997	--	--	--	--	4.6
		Jan/Feb 1998	0.006	--	--	--	4.7
		Apr/May 1998	--	--	--	--	4.9
		Jul/Aug 1998	--	--	--	--	4.9
Screen 4	3 rd	Oct/Nov 1998	--	--	--	--	7.8
		Feb/Mar 1999	0.006	--	0.013	--	34.8
		May/Jun 1999	--	--	--	--	27.2
		Aug 1999	(2)	(2)	--	--	25.2
Screen 4	4 th	Nov/Dec 1999	(2)	(2)	--	--	45.5
		Mar/Apr 2000	(2)	(2)	--	--	18.9
		Jul/Aug 2000	--	--	--	--	6.9
		Sep/Oct 2000	(2)	(2)	--	--	15.0
Screen 5	2 nd	Sep/Oct 1997	--	--	--	--	4.0
		Jan/Feb 1998	--	--	--	--	4.9
		Apr/May 1998	--	--	--	--	4.3
		Jul/Aug 1998	--	--	--	--	4.8
Screen 5	3 rd	Oct/Nov 1998	--	--	--	--	8.3
		Feb/Mar 1999	--	0.003	--	--	6.1
		May/Jun 1999	--	--	--	--	10.0
		Aug 1999	(2)	(2)	--	--	10.5
Screen 5	4 th	Nov/Dec 1999	(2)	(2)	--	--	14.7
		Mar/Apr 2000	(2)	(2)	--	--	9.5
		Jul/Aug 2000	--	--	--	--	4.9
		Sep/Oct 2000	(2)	(2)	--	--	5.6

TABLE 3-2

**SUMMARY OF METALS DETECTED DURING
THE FIRST 4 YEARS OF LONG-TERM
QUARTERLY GROUNDWATER MONITORING,
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(concentrations in mg/L)

Values above state or Federal MCLs, or above/equal to action levels, are bold and shaded
(see final page of Table for MCLs and notes)

Sample Location	Program Year	Sampling Date	Arsenic	Lead	Total Chromium	Hexavalent Chromium	Field Turbidity (NTUs)
Practical Quantitation Limit			0.005	0.002	0.010	0.005	
Calif. Maximum Contaminant Level			0.05	(10)	0.05	NE	
EPA Maximum Contaminant Level			0.05	(10)	0.10	NE	

--: Not detected.

NS: Not sampled.

NE: Not established.

- 1: Probable lab error. MW-1 is always upgradient of the site, and Cr contamination is not believed to be present upgradient of the site.
- 2: Monitoring point not sampled at all, or not sampled for the particular constituent due to changes in the sampling program as agreed to by the EPA, DTSC, and RWQCB.
- 3: Believed to be a laboratory error.
- 4: Not sampled due to U.S. Filter's Pilot Test.
- 5: Result from original analysis; duplicate sample was non-detect.
- 6: Not sampled, no water over screen.
- 7: Not sampled due to mechanical failure.
- 8: Wells installed June-August 1997.
- 9: Turbidity not measured due to equipment failure.
- 10: Treatment technique and public notification triggered at Action Level of 0.015 mg/L.

TABLE 4-1

**GENERAL WATER TYPES OBSERVED DURING THE FOURTH YEAR
OF LONG-TERM QUARTERLY GROUNDWATER MONITORING
JET PROPULSION LABORATORY**

Well/Screen Number	Water Type ¹	Well/Screen Number	Water Type	Well/Screen Number	Water Type
MW-1	Type 1	MW-14		MW-21	
MW-3		Screen 1	Type 3	Screen 1	Type 3,1
Screen 1	Type 1	Screen 2	Type 3	Screen 2	Type 3
Screen 2	Type 1	Screen 3	Type 3,1	Screen 3	Type 3
Screen 3	Type 2	Screen 4	Type 1,2	Screen 4	Type 3,1
Screen 4	Type 2	Screen 5	Type 2	Screen 5	Type 3,1
Screen 5	Type 2	MW-15	Type 1	MW-22	
MW-4		MW-16	Type 1	Screen 1	Type 3
Screen 1	Type 1	MW-17		Screen 2	Type 1,3
Screen 2	Type 1,3	Screen 1	Type 1	Screen 3	Type 1,2,3
Screen 3	Type 2	Screen 2	Type 1	Screen 4	Type 1,2
Screen 4	Type 2	Screen 3	Type 1	Screen 5	Type 2
Screen 5	Type 2,1	Screen 4	Type 1,2	MW-23	
MW-5	Type 1	Screen 5	Type 1,2	Screen 1	Type 3
MW-6	Type 1,3	MW-18		Screen 2	Type 3
MW-7	Type 1	Screen 1	Type 1	Screen 3	Type 1,2,3
MW-8	Type 1	Screen 2	Type 1	Screen 4	Type 1,2
MW-9	Type 1	Screen 3	Type 1	Screen 5	Type 2
MW-10	Type 1	Screen 4	Type 1,2	MW-24	
MW-11		Screen 5	Type 2	Screen 1	Type 1
Screen 1	Type 1	MW-19		Screen 2	Type 2
Screen 2	Type 1	Screen 1	Type 1	Screen 3	Type 2,1
Screen 3	Type 1	Screen 2	Type 3,1	Screen 4	Type 2
Screen 4	Type 1	Screen 3	Type 3	Screen 5	Type 2,1
Screen 5	Type 2	Screen 4	Type 1		
MW-12		Screen 5	Type 3		
Screen 1	Type 1	MW-20			
Screen 2	Type 1	Screen 1	Type 1,3		
Screen 3	Type 1	Screen 2	Type 1		
Screen 4	Type 1	Screen 3	Type 2,1		
Screen 5	Type 1,2	Screen 4	Type 2		
MW-13	Type 1	Screen 5	Type 2		

1: General Water Types:

- Type 1: Calcium-bicarbonate groundwater
- Type 2: Sodium-bicarbonate groundwater
- Type 3: Calcium-bicarbonate/chloride/sulfate groundwater

Note: Water type denoted by more than one number (i.e., ½) represent blends of the listed basic types, with the more dominant type listed first.

TABLE 5-1
MONTHLY WATER-LEVEL ELEVATION DATA FOR THE FOURTH YEAR OF JPL GROUNDWATER MONITORING
 (feet above mean sea level)

Well #	11/15/1999	12/16/1999	1/19/1999	2/25/2000	3/6&8/20	4/3/2000	5/11/2000	6/19/2000	7/11/2000	8/8/2000	9/8/2000	10/12/2000
MW-1	1085.04	1087.94	1093.12	1093.65	1093.94	1092.71	1091.86	1088.29	1084.66	1082.64	1079.96	1079.30
MW-3												
1 (top)	960.52	962.42	964.25	975.66	985.93	993.83	993.42	986.78	977.51	968.37	960.86	959.08
2	955.99	957.67	959.16	965.50	973.35	980.99	981.06	977.56	969.32	961.56	955.10	956.17
3	952.98	954.85	956.69	962.32	969.46	976.55	976.13	973.09	965.51	958.25	951.85	954.78
4	873.85	876.77	877.13	881.94	887.22	891.89	889.41	892.71	889.30	882.83	873.57	906.70
5	843.51	847.29	847.10	852.03	856.24	860.93	858.95	863.23	860.43	853.81	845.05	881.76
MW-4												
1 (top)	966.57	967.25	969.53	979.98	992.89	1002.11	1000.99	993.80	985.33	975.55	967.45	963.12
2	959.65	961.00	962.61	967.51	975.09	982.74	982.38	979.38	972.33	964.81	958.29	958.90
3	957.51	959.10	960.67	965.03	971.84	978.90	978.29	975.72	969.11	962.09	955.76	957.89
4	948.78	950.30	951.71	956.13	962.43	968.97	967.93	966.07	960.06	953.29	946.80	953.08
5	869.21	872.10	871.97	877.08	882.98	887.23	884.64	887.91	885.80	879.77	870.07	900.27
MW-5	967.17	967.36	969.52	976.67	988.43	999.17	998.33	992.21	984.10	974.94	968.40	963.27
MW-6	986.51	986.93	988.51	989.74	992.50	999.40	998.76	996.34	990.63	983.94	978.82	977.16
MW-7	968.75	968.82	971.17	974.74	980.91	995.86	998.18	994.68	986.99	977.57	No Data	No Data
MW-8	969.29	969.53	971.88	977.39	984.48	999.48	1000.80	996.07	988.04	978.50	970.19	965.05
MW-9	1079.23	1080.25	1086.69	1087.48	1087.86	1085.71	1084.19	1083.23	1081.30	1079.48	1077.41	1076.14
MW-10	970.49	970.60	972.51	975.63	983.05	994.31	994.67	991.17	984.26	976.07	969.05	965.39
MW-11												
1 (top)	1012.74	1012.64	1015.89	1018.51	1020.55	1025.03	1026.06	1023.71	1020.67	1016.86	1013.36	1010.67
2	971.89	972.83	975.24	979.57	985.91	994.48	994.89	991.71	984.95	977.41	970.95	969.98
3	957.92	959.20	961.52	964.91	970.38	977.44	976.95	975.08	968.88	961.88	955.63	960.62
4	949.59	950.92	954.83	956.05	960.14	966.22	965.52	967.75	961.17	954.51	948.06	956.95
5	905.76	889.34	890.53	894.73	899.80	905.29	903.31	905.09	901.62	894.86	886.22	913.68

TABLE 5-1

MONTHLY WATER-LEVEL ELEVATION DATA FOR THE FOURTH YEAR OF JPL GROUNDWATER MONITORING
 (feet above mean sea level)

Well #	11/15/1999	12/16/1999	1/19/1999	2/25/2000	3/6&8/20	4/3/2000	5/11/2000	6/19/2000	7/11/2000	8/8/2000	9/8/2000	10/12/2000
MW-12												
1 (top)	969.38	972.07	974.37	988.06	1000.12	1010.17	1008.16	999.65	990.25	979.97	971.09	965.94
2	961.44	963.65	964.81	970.32	978.09	986.63	986.26	983.04	975.47	967.51	960.61	960.50
3	958.98	961.45	962.57	967.54	974.69	982.37	981.80	979.17	971.82	964.31	957.74	959.15
4	946.40	949.04	950.10	954.50	960.67	967.16	965.82	964.49	958.25	951.53	944.98	952.96
5	883.05	886.49	886.81	891.13	896.65	901.44	898.49	901.67	898.15	891.54	882.81	911.49
MW-13	972.21	972.38	974.48	977.04	982.29	995.18	996.99	994.21	987.14	978.54	971.24	966.81
MW-14												
1 (top)	989.22	ND	ND	ND	ND	1001.29	1000.10	997.56	992.34	968.42	980.76	979.43
2	988.43	ND	ND	ND	ND	1001.36	999.25	996.48	991.08	984.36	979.90	980.16
3	988.59	ND	ND	ND	ND	1001.53	998.72	995.85	990.44	983.72	979.61	980.89
4	988.59	ND	ND	ND	ND	1001.45	998.60	995.67	990.23	983.55	979.52	981.03
5	988.03	ND	ND	ND	ND	1000.84	997.38	994.66	989.06	982.49	978.47	980.86
MW-15	1082.63	1085.29	1090.62	1092.00	1092.13	1090.33	1089.30	1085.88	1083.51	1081.55	1079.08	1077.94
MW-16	971.32	971.42	973.57	976.17	981.33	994.85	996.98	994.20	987.01	978.23	979.69	965.99
MW-17												
1 (top)	956.14	956.17	957.88	960.49	969.62	990.39	991.57	985.67	976.57	967.16	959.05	954.30
2	950.51	952.66	954.18	959.33	966.30	973.65	974.16	971.99	960.05	952.73	948.13	951.93
3	942.10	944.82	946.54	950.61	955.46	962.05	961.08	962.00	943.24	935.92	935.51	946.83
4	885.41	888.47	889.27	893.65	898.32	903.13	899.10	903.13	894.89	888.41	880.36	914.77
5	874.18	877.36	878.83	882.11	886.42	891.38	888.09	892.83	885.96	879.37	870.77	905.51
MW-18												
1 (top)	N/W	N/W	N/W	965.93	962.28	974.80	979.94	977.76	971.39	962.78	N/W	N/W
2	952.98	954.08	956.41	959.96	964.21	974.71	978.69	976.48	969.36	961.08	953.95	951.20
3	951.00	952.63	954.63	959.66	965.78	973.50	974.22	972.27	962.61	955.14	949.06	951.74
4	924.04	925.99	928.33	931.66	935.94	941.96	938.68	942.24	931.11	923.97	916.53	937.35
5	908.78	911.16	915.21	915.77	918.66	923.71	918.89	926.88	915.55	908.00	900.16	924.41

TABLE 5-1

MONTHLY WATER-LEVEL ELEVATION DATA FOR THE FOURTH YEAR OF JPL GROUNDWATER MONITORING
 (feet above mean sea level)

Well #	11/15/1999	12/16/1999	1/19/1999	2/25/2000	3/6&8/20	4/3/2000	5/11/2000	6/19/2000	7/11/2000	8/8/2000	9/8/2000	10/12/2000
MW-19												
1 (top)	954.80	955.44	956.96	960.34	968.27	974.91	975.89	974.13	968.14	961.47	955.11	953.91
2	942.47	944.57	945.76	950.07	955.90	961.86	962.59	960.74	954.83	949.51	944.18	948.19
3	937.13	939.76	940.67	945.21	950.94	956.79	957.12	955.47	950.06	944.71	938.94	945.76
4	833.47	835.47	835.68	839.33	845.40	847.31	844.90	851.79	851.88	846.46	833.84	868.84
5	826.44	831.43	831.88	835.35	841.14	843.04	840.67	847.65	847.95	842.43	830.17	865.03
MW-20												
1 (top)	946.99	949.89	952.05	953.24	954.22	957.80	958.56	957.30	952.78	946.94	940.76	943.79
2	947.16	949.96	952.02	953.48	954.50	958.93	957.59	957.71	951.40	945.53	939.42	945.28
3	937.48	940.07	942.17	943.61	945.45	949.09	935.07	937.75	924.85	918.28	911.63	941.35
4	918.84	921.38	926.62	924.92	926.39	930.89	924.53	932.37	919.43	910.87	904.80	920.54
5	947.38	948.07	949.98	950.01	952.34	956.68	957.65	959.78	954.87	949.70	944.30	945.97
MW-21												
1 (top)	979.39	979.62	980.96	982.18	986.26	992.86	993.56	992.23	987.06	980.78	974.87	972.16
2	979.98	980.91	982.10	984.24	988.70	994.51	993.92	991.96	986.71	980.24	974.69	973.59
3	979.64	980.87	981.94	984.32	988.56	994.17	993.25	991.14	985.94	979.50	974.16	973.67
4	978.56	979.94	980.96	983.28	987.51	992.98	991.90	989.73	984.55	978.14	972.84	972.73
5	978.50	979.86	980.88	983.18	987.45	992.97	991.88	989.66	984.45	978.05	972.80	972.66
MW-22												
1 (top)	976.14	976.86	978.65	980.43	985.31	994.99	996.26	993.93	987.60	979.68	973.18	969.93
2	976.43	977.75	979.28	982.00	986.95	993.71	992.86	989.96	983.90	976.83	971.62	971.92
3	976.87	978.20	979.80	982.45	987.26	993.83	992.76	989.86	983.94	976.95	971.83	972.33
4	957.97	959.52	960.99	963.86	968.76	974.74	973.05	971.33	966.09	959.40	953.55	961.31
5	945.39	947.42	948.65	951.81	957.03	963.01	961.29	960.20	955.19	948.63	942.21	953.37

TABLE 5-1

MONTHLY WATER-LEVEL ELEVATION DATA FOR THE FOURTH YEAR OF JPL GROUNDWATER MONITORING
 (feet above mean sea level)

Well #	11/15/1999	12/16/1999	1/19/1999	2/25/2000	3/6&8/20	4/3/2000	5/11/2000	6/19/2000	7/11/2000	8/8/2000	9/8/2000	10/12/2000
MW-23												
1 (top)	972.91	973.05	975.52	977.82	984.30	994.40	995.47	992.75	986.20	977.88	971.20	967.63
2	970.11	970.77	972.99	975.99	981.92	989.31	988.70	986.19	979.82	972.51	966.60	967.32
3	970.05	970.84	973.04	976.06	981.61	988.71	987.77	962.10	978.98	971.92	966.17	967.58
4	947.33	948.56	950.60	953.66	958.93	965.02	963.55	962.47	957.33	950.42	944.05	955.87
5	946.77	948.05	950.22	952.84	958.23	964.46	963.00	962.01	956.92	950.00	943.66	955.79
MW-24												
1 (top)	970.45	971.16	973.19	976.78	983.96	996.75	998.46	995.26	987.90	978.71	970.78	965.85
2	967.40	971.14	970.38	974.19	980.57	988.97	988.80	985.85	979.22	971.50	965.02	964.50
3	965.76	967.43	968.79	972.41	978.34	985.49	984.72	982.13	975.83	968.60	962.57	963.87
4	940.80	942.98	944.11	947.48	952.87	958.86	957.01	956.33	951.31	944.58	937.84	949.88
5	916.70	919.35	920.05	926.02	929.87	934.76	932.48	933.27	929.10	922.49	914.80	933.72

Notes:

ND: No data due to inaccessibility of well.

N/W: No water over measurement port.

TABLE 6-1**WELL SCREEN CLASSIFICATIONS FOR JPL GROUNDWATER MONITORING WELLS, October 2000**

Well and Screen Number	CONSTITUENTS OF CONCERN											
	VOCs				Perchlorate				Total and Hexavalent Cromium			
	COC Detect Last 2 Years	Plume	Down-gradient	Up-gradient	COC Detect Last 2 Years	Plume	Down-gradient	Up-gradient	COC Detect Last 2 Years	Plume	Down-gradient	Up-gradient
MW-1	No		X		No		X		No			X
MW-3												
Screen 1	No		X		No		X		No			X
Screen 2	No		X		No		X		No		X	
Screen 3	Yes	X			Yes	X			No		X	
Screen 4	No		X		No		X		No		X	
Screen 5	No		X		Yes	X			No			X
MW-4												
Screen 1	No	X			No		X		No		X	
Screen 2	Yes	X			Yes	X			Yes	X		
Screen 3	No		X		No		X		No		X	
Screen 4	No		X		No			X	No		X	
Screen 5	No		X		No			X	No			X
MW-5	No	X			No		X		No		X	
MW-6	Yes	X			Yes	X			Yes	X		
MW-7	Yes	X			Yes	X			Yes	X		
MW-8	Yes	X			Yes	X			Yes	X		
MW-9	No		X		No		X		No			X
MW-10	Yes	X			Yes	X			Yes	X		
MW-11												
Screen 1	Yes	X			No		X		No		X	
Screen 2	Yes	X			No		X		No		X	
Screen 3	Yes	X			No		X		No		X	
Screen 4	No		X		No		X		No			X
Screen 5	No		X		No			X	No			X

TABLE 6-1

WELL SCREEN CLASSIFICATIONS FOR JPL GROUNDWATER MONITORING WELLS, October 2000

Well and Screen Number	CONSTITUENTS OF CONCERN											
	VOCs				Perchlorate				Total and Hexavalent Chromium			
	COC Detect Last 2 Years	Plume	Down-gradient	Up-gradient	COC Detect Last 2 Years	Plume	Down-gradient	Up-gradient	COC Detect Last 2 Years	Plume	Down-gradient	Up-gradient
MW-12												
Screen 1	No		X		No		X		No		X	
Screen 2	Yes	X			Yes	X			No			X
Screen 3	Yes	X			Yes	X			No			X
Screen 4	Yes	X			Yes	X			No			X
Screen 5	Yes	X			Yes	X			No			X
MW-13	Yes	X			Yes	X			Yes	X		
MW-14												
Screen 1	Yes	X			Yes	X			No			X
Screen 2	Yes	X			Yes	X			No			X
Screen 3	Yes	X			Yes	X			No			X
Screen 4	No		X		Yes	X			No			X
Screen 5	No			X	No		X		No			X
MW-15	No		X		No		X		No			X
MW-16	Yes	X			Yes	X			Yes	X		
MW-17												
Screen 1	No			X	No			X	No			X
Screen 2	No		X		No		X		No			X
Screen 3	Yes	X			Yes	X			No			X
Screen 4	Yes	X			Yes	X			No			X
Screen 5	Yes	X			Yes	X			No			X
MW-18												
Screen 1	No			X	No			X	No			X
Screen 2	No		X		No			X	No		X	
Screen 3	Yes	X			No		X		Yes	X		
Screen 4	Yes	X			Yes	X			No		X	
Screen 5	No		X		No		X		No			X

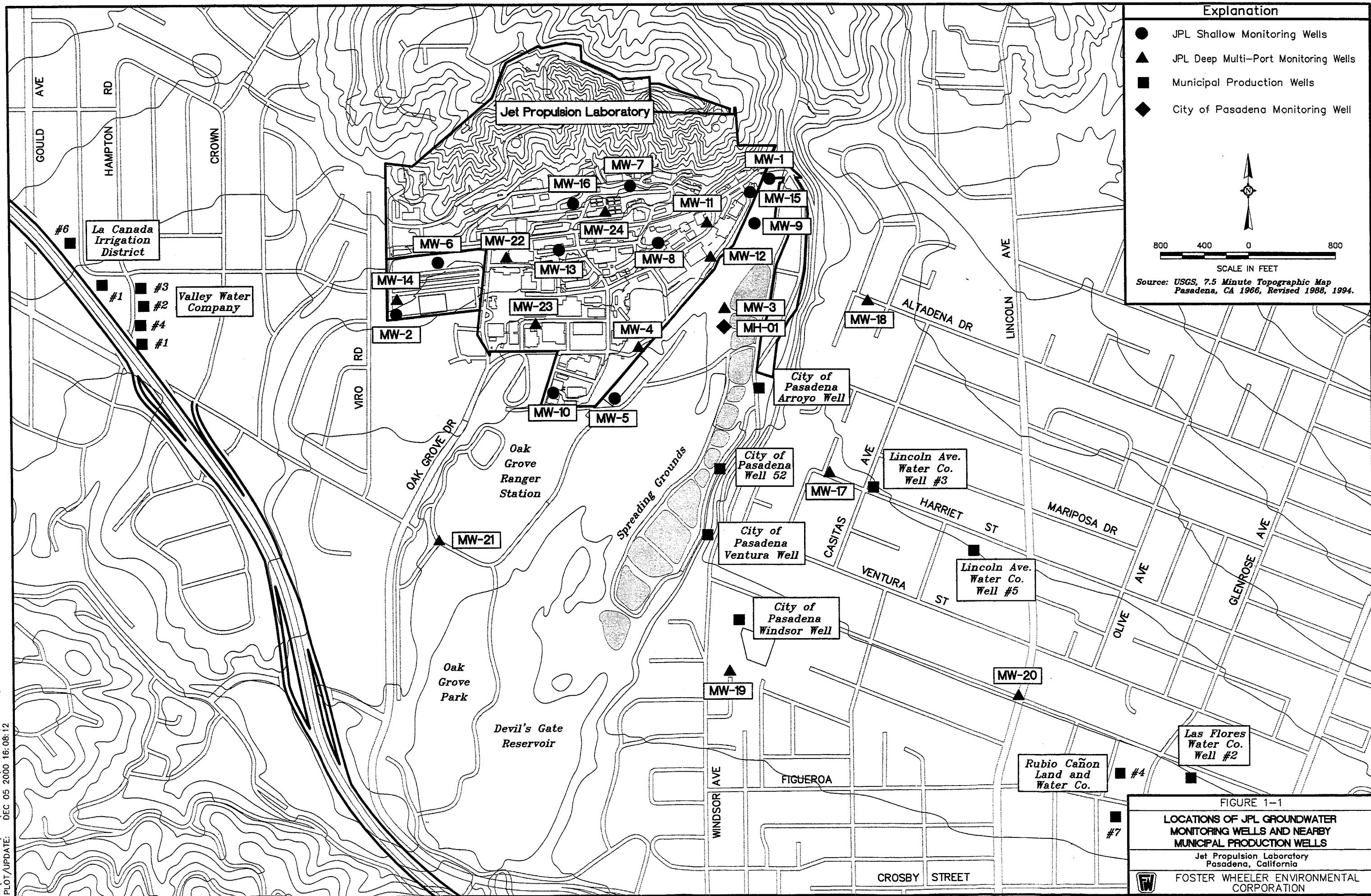
TABLE 6-1**WELL SCREEN CLASSIFICATIONS FOR JPL GROUNDWATER MONITORING WELLS, October 2000**

Well and Screen Number	CONSTITUENTS OF CONCERN										
	VOCs				Perchlorate			Total and Hexavalent Chromium			
	COC Detect Last 2 Years	Plume	Down-gradient	Up-gradient	COC Detect Last 2 Years	Plume	Down-gradient	Up-gradient	COC Detect Last 2 Years	Plume	Down-gradient
MW-19											
Screen 1	No		X		No		X		No		X
Screen 2	Yes	X			Yes	X			No		X
Screen 3	Yes	X			Yes	X			No		X
Screen 4	Yes	X			No		X		No		X
Screen 5	Yes	X			Yes	X			No		X
MW-20											
Screen 1	No		X		Yes	X			No		X
Screen 2	No		X		No		X		No		X
Screen 3	No		X		No		X		No		X
Screen 4	No		X		Yes	X			No		X
Screen 5	No		X		Yes	X			No		X
MW-21											
Screen 1	Yes	X			Yes	X			No		X
Screen 2	Yes	X			Yes	X			No		X
Screen 3	Yes	X			Yes	X			No		X
Screen 4	Yes	X			Yes	X			No		X
Screen 5	Yes	X			Yes	X			No		X
MW-22											
Screen 1	Yes	X			Yes	X			No		X
Screen 2	Yes	X			No		X		No		X
Screen 3	No		X		No		X		No		X
Screen 4	No			X	No			X	No		X
Screen 5	No			X	No			X	No		X

TABLE 6-1**WELL SCREEN CLASSIFICATIONS FOR JPL GROUNDWATER MONITORING WELLS, October 2000**

Well and Screen Number	CONSTITUENTS OF CONCERN											
	VOCs				Perchlorate				Total and Hexavalent Chromium			
	COC Detect Last 2 Years	Plume	Down-gradient	Up-gradient	COC Detect Last 2 Years	Plume	Down-gradient	Up-gradient	COC Detect Last 2 Years	Plume	Down-gradient	Up-gradient
MW-23												
Screen 1	Yes	X			Yes	X			No		X	
Screen 2	Yes	X			Yes	X			No		X	
Screen 3	No		X		No		X		No		X	
Screen 4	No			X	No		X		No		X	
Screen 5	No			X	Yes	X			No			X
MW-24												
Screen 1	Yes	X			Yes	X			No		X	
Screen 2	Yes	X			Yes	X			No		X	
Screen 3	No		X		No		X		Yes	X		
Screen 4	No			X	No			X	No		X	
Screen 5	No			X	No			X	No			X

FIGURES



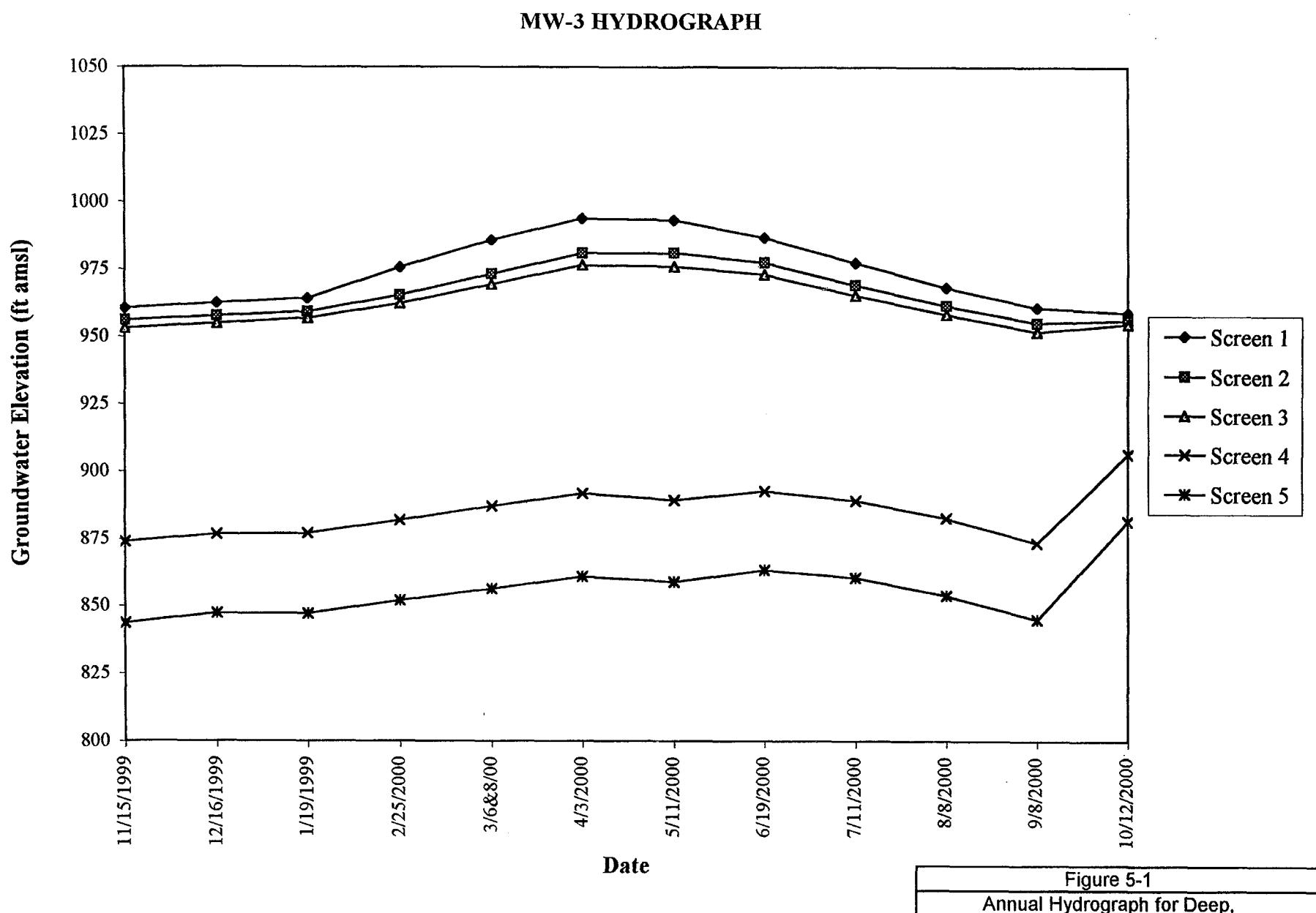
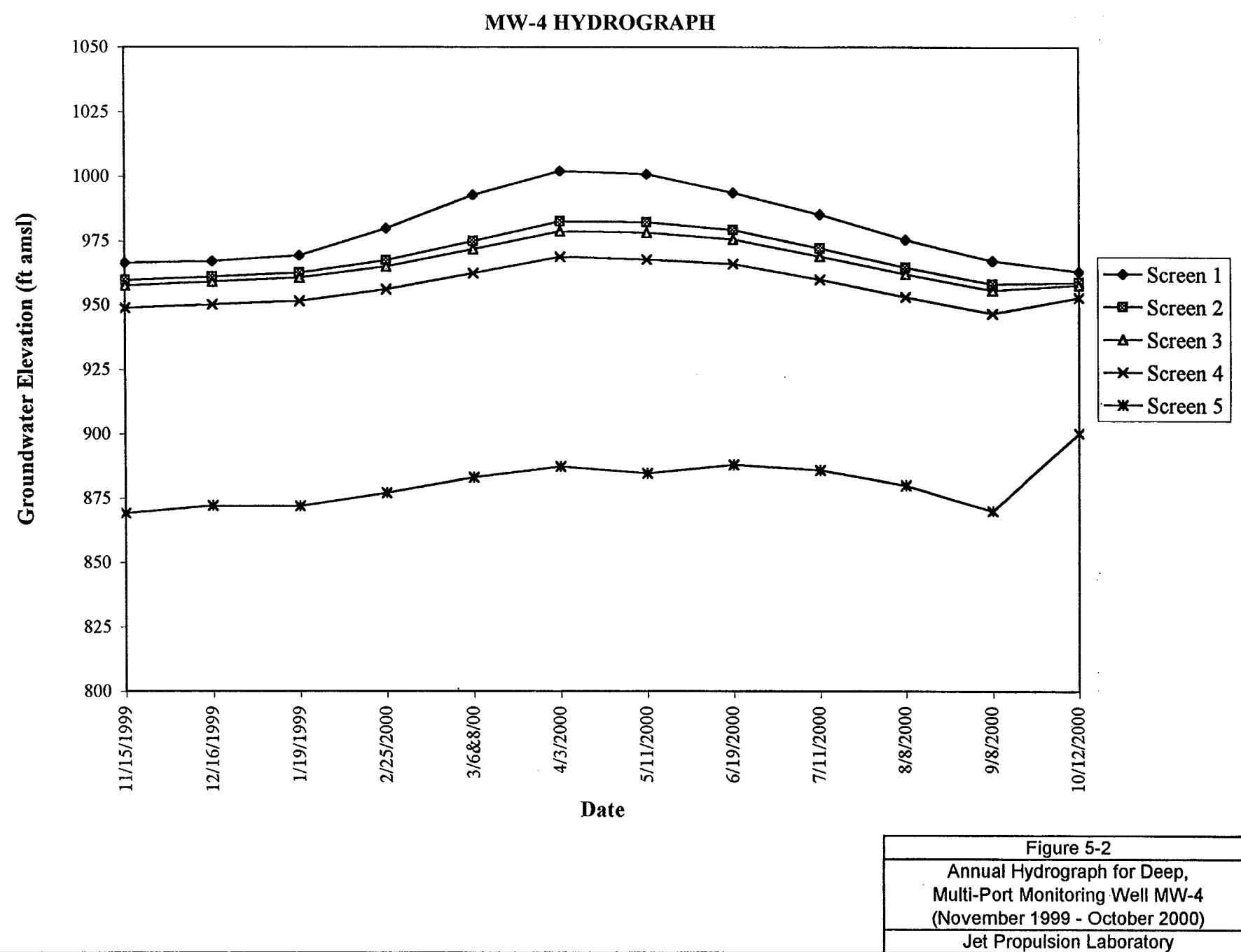


Figure 5-1

Annual Hydrograph for Deep,
Multi-Port Monitoring Well MW-3
(November 1999 - October 2000)
Jet Propulsion Laboratory



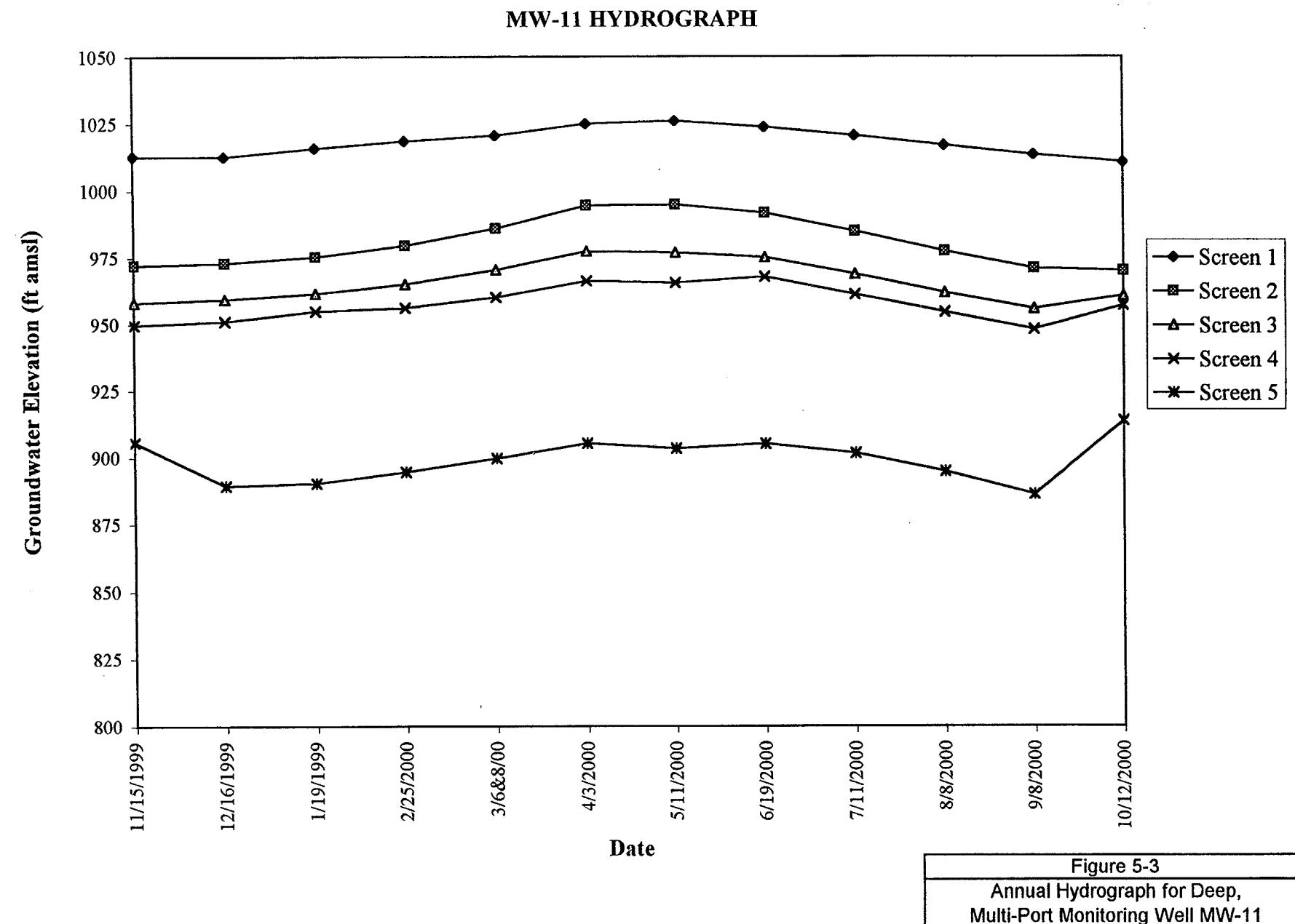


Figure 5-3

Annual Hydrograph for Deep,
Multi-Port Monitoring Well MW-11
(November 1999 - October 2000)

Jet Propulsion Laboratory

MW-12 HYDROGRAPH

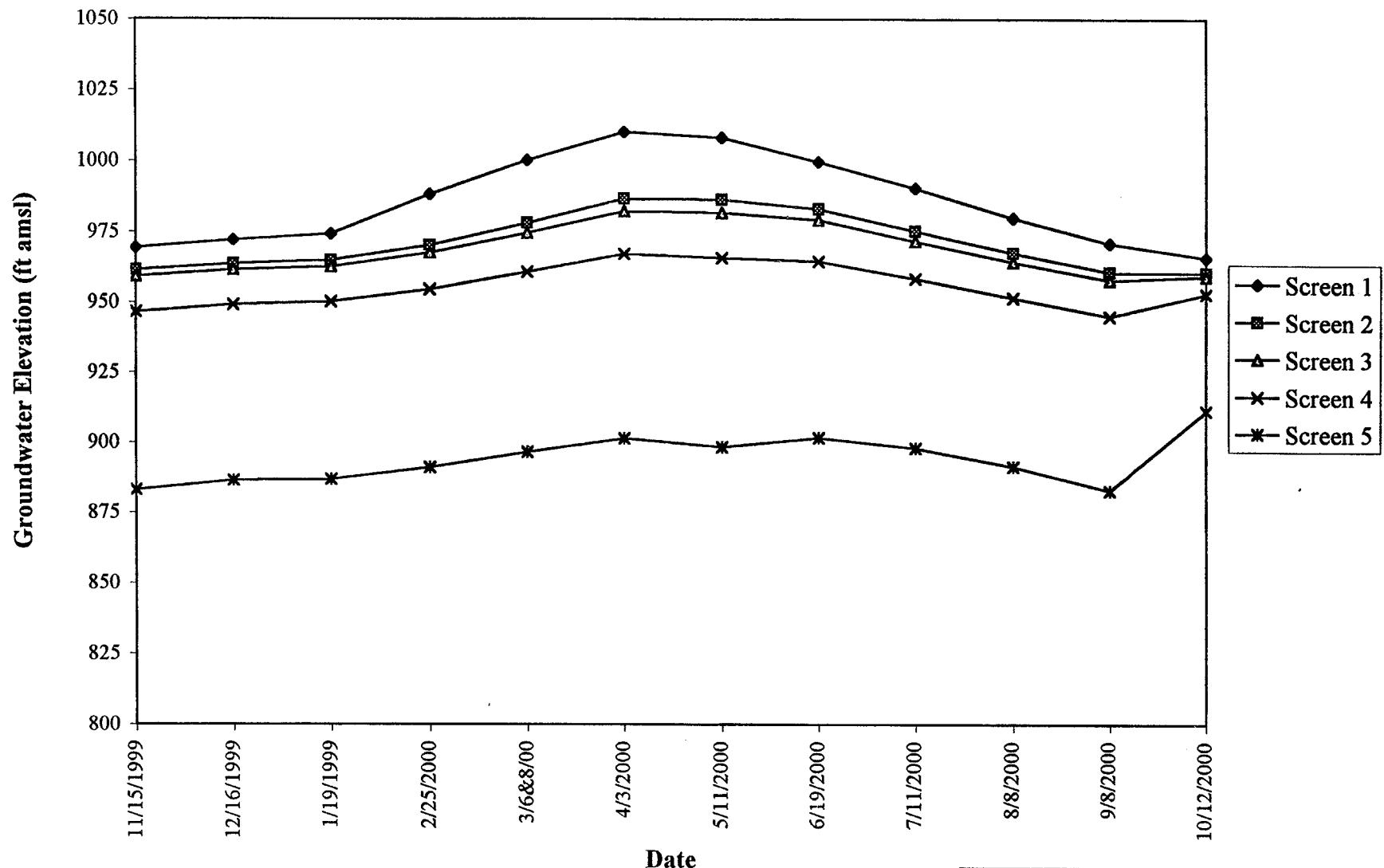
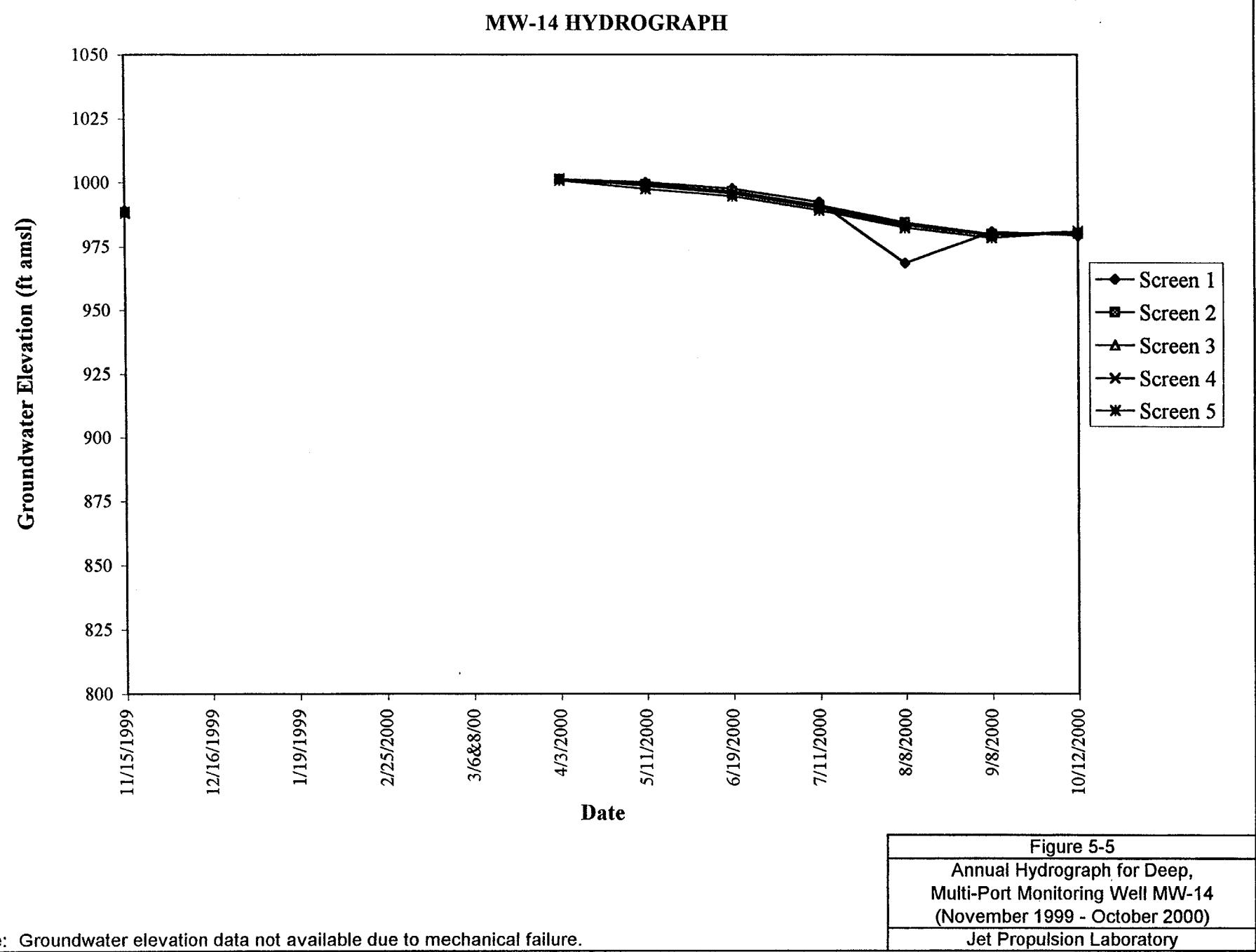


Figure 5-4

Annual Hydrograph for Deep,
Multi-Port Monitoring Well MW-12
(November 1999 - October 2000)

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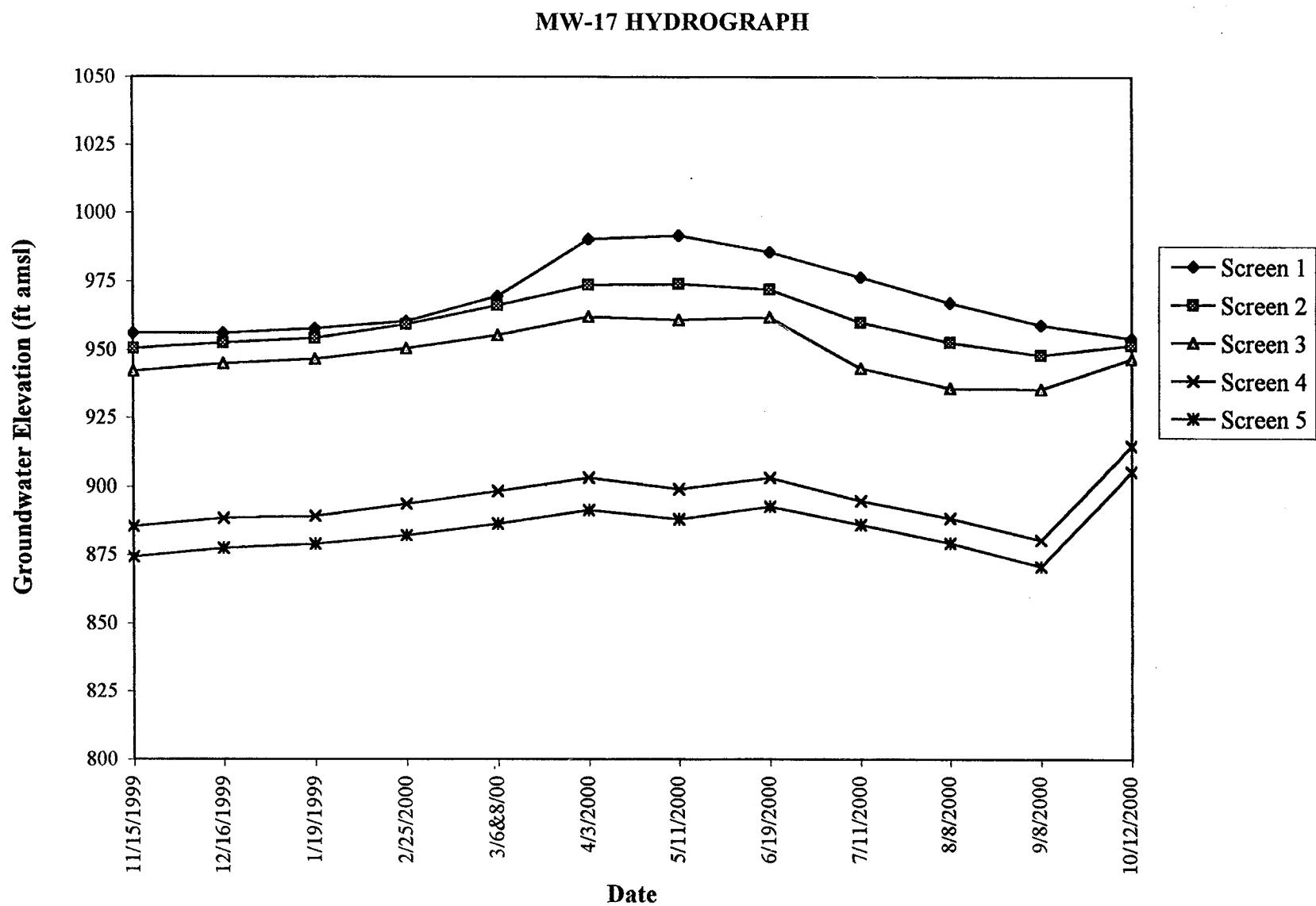
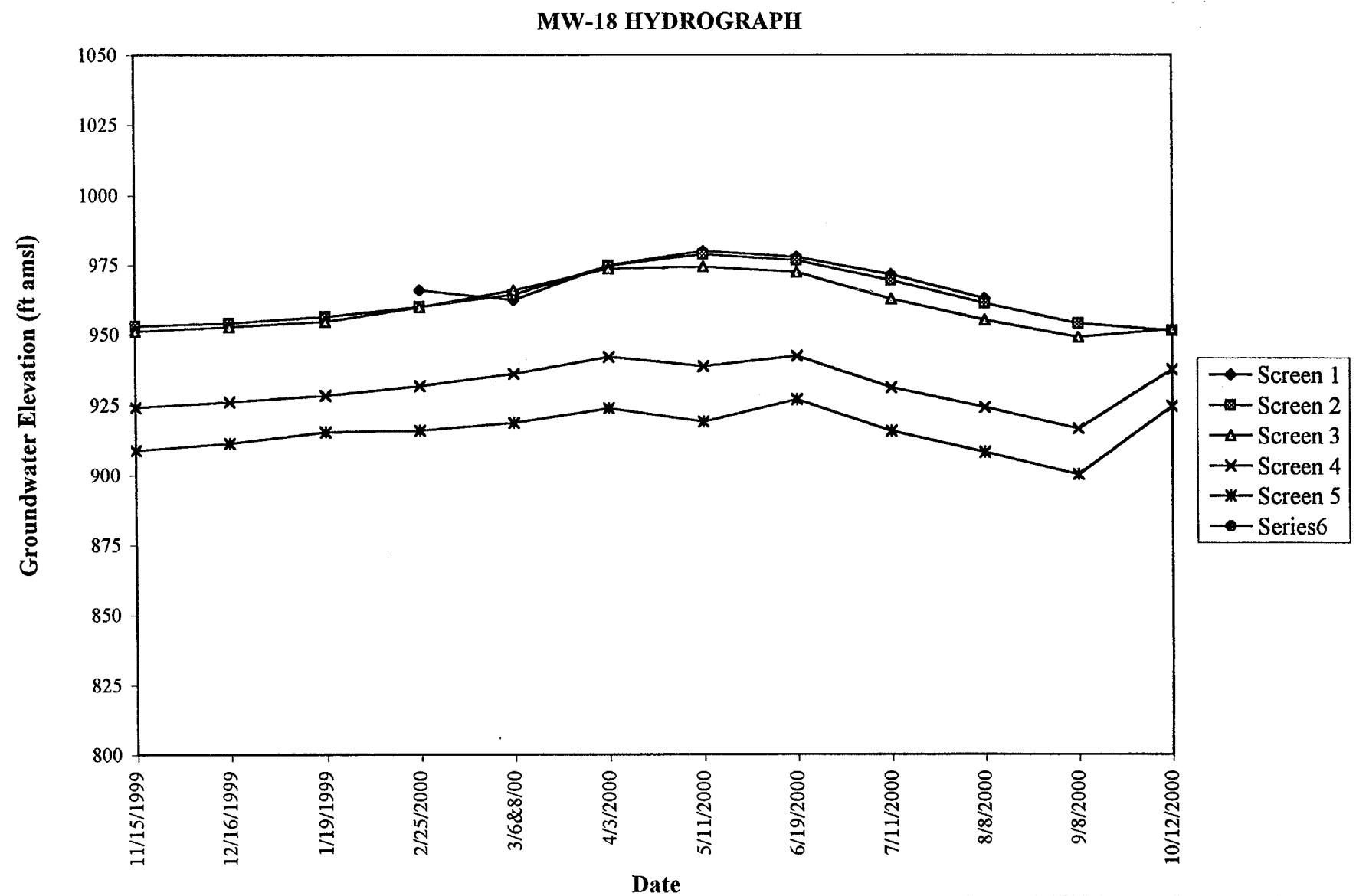


Figure 5-6

Annual Hydrograph for Deep,
Multi-Port Monitoring Well MW-17
(November 1999 - October 2000)
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Note: Groundwater elevation below screen one measurement port 9/20/99 through 2/25/00 and 8/8/00 through 10/12/00.

Figure 5-7

Annual Hydrograph for Deep,
Multi-Port Monitoring Well MW-18
(November 1999 - October 2000)

Jet Propulsion Laboratory

MW-19 HYDROGRAPH

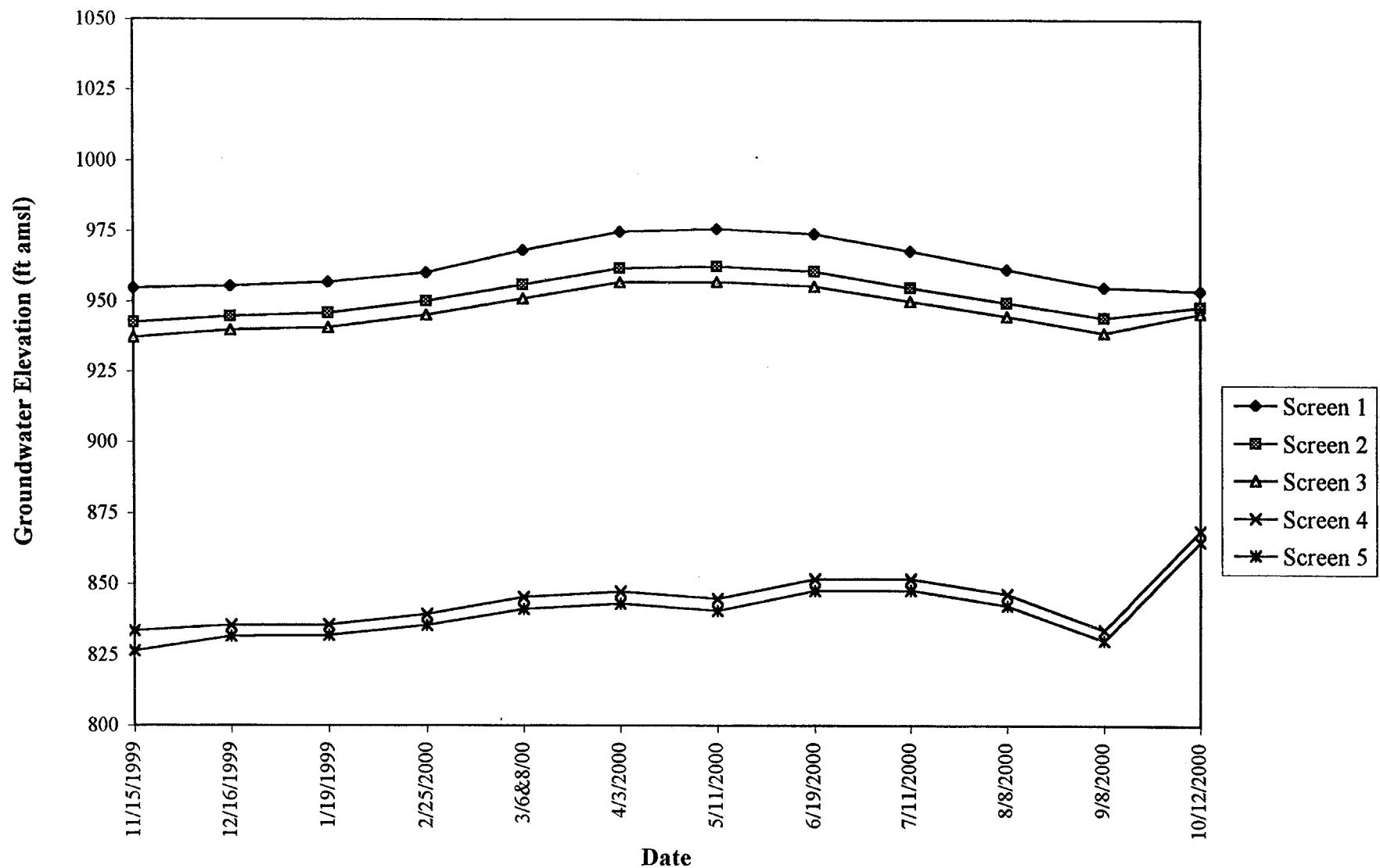


Figure 5-8

Annual Hydrograph for Deep,
Multi-Port Monitoring Well MW-19
(November 1999 - October 2000)

Jet Propulsion Laboratory

MW-20 HYDROGRAPH

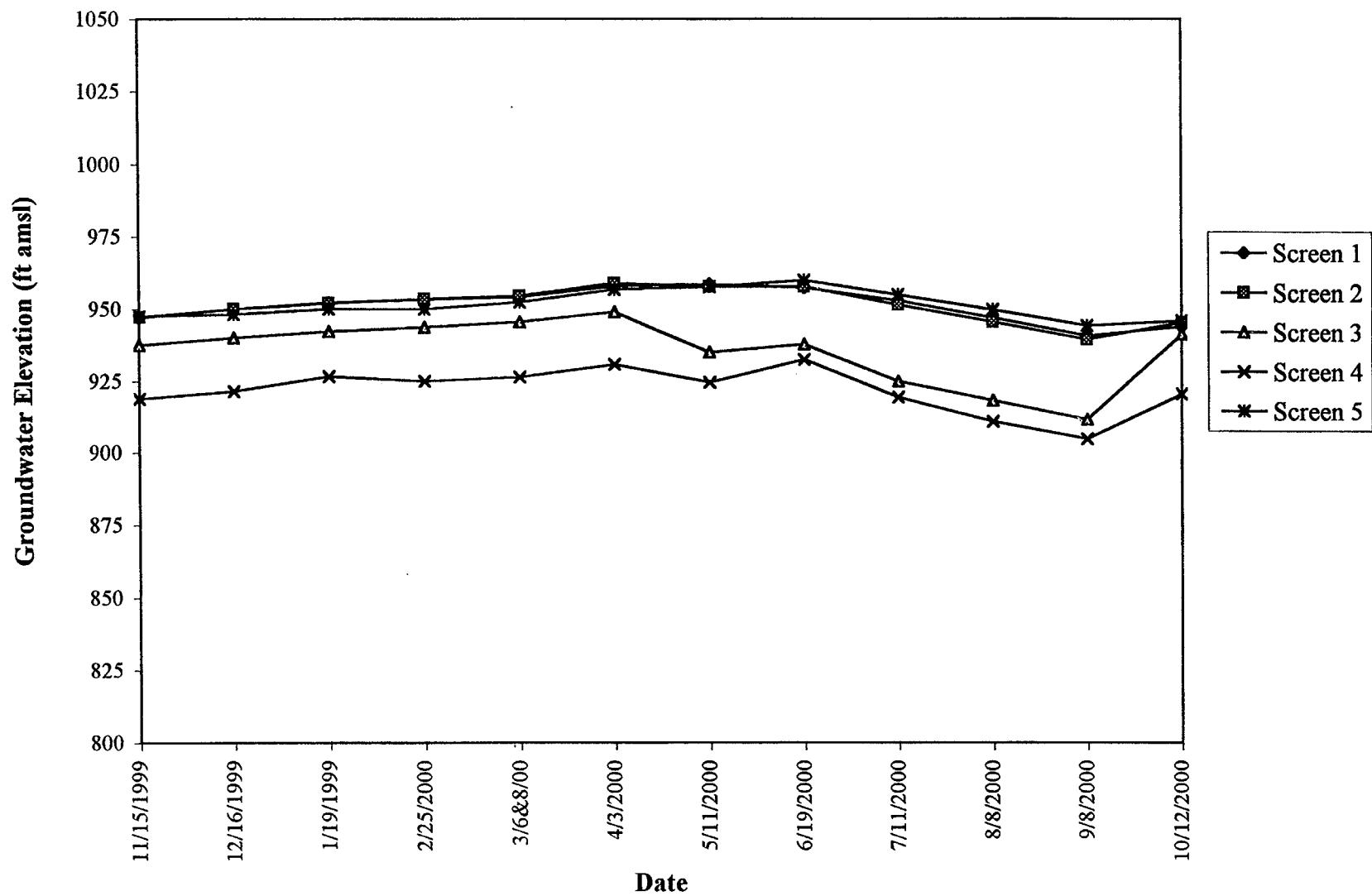


Figure 5-9

Annual Hydrograph for Deep,
Multi-Port Monitoring Well MW-20
(November 1999 - October 2000)

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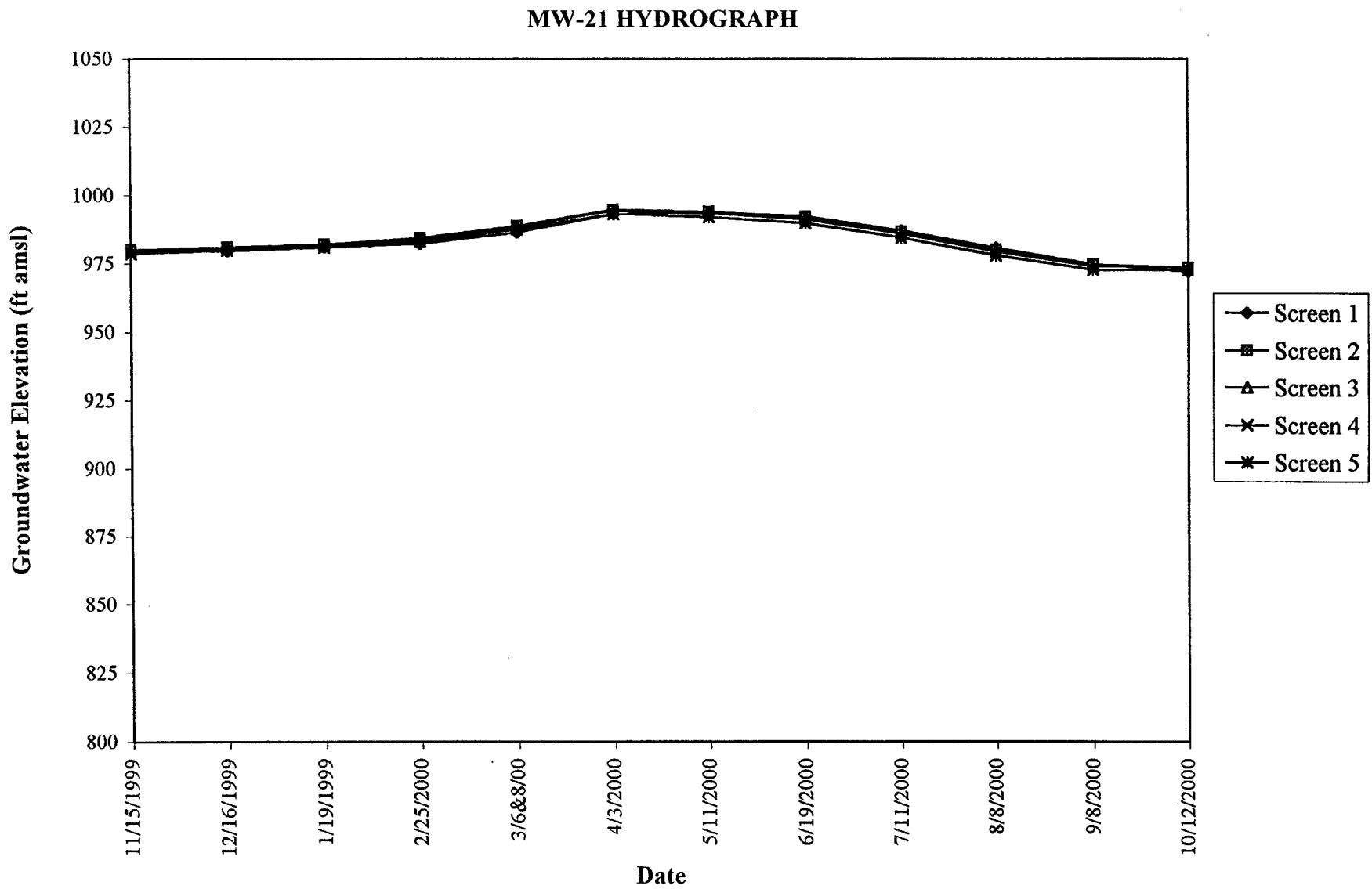


Figure 5-10

Annual Hydrograph for Deep,
Multi-Port Monitoring Well MW-21
(November 1999 - October 2000)

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MW-22 HYDROGRAPH

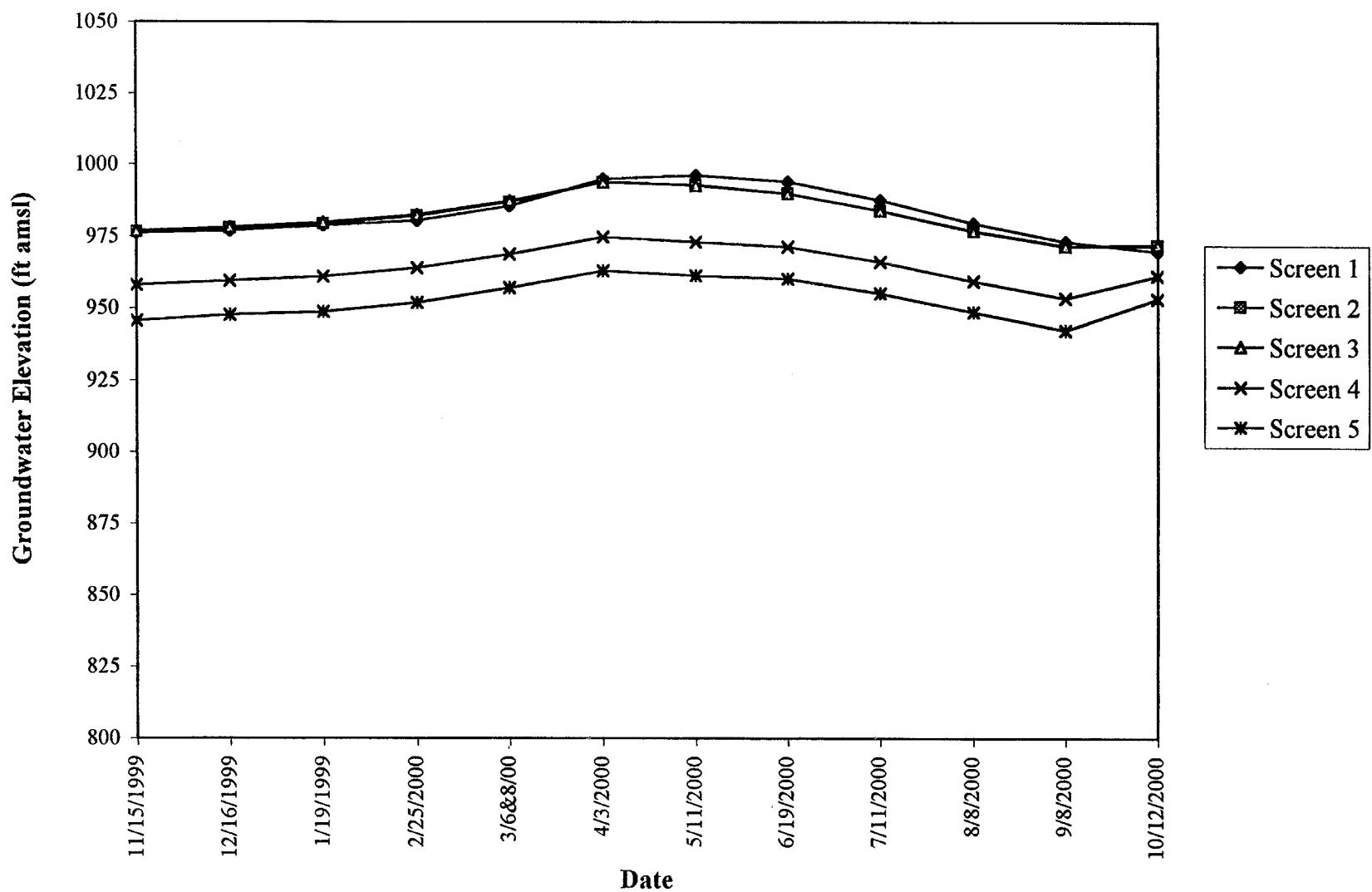


Figure 5-11

Annual Hydrograph for Deep,
Multi-Port Monitoring Well MW-22
(November 1999 - October 2000)
Jet Propulsion Laboratory

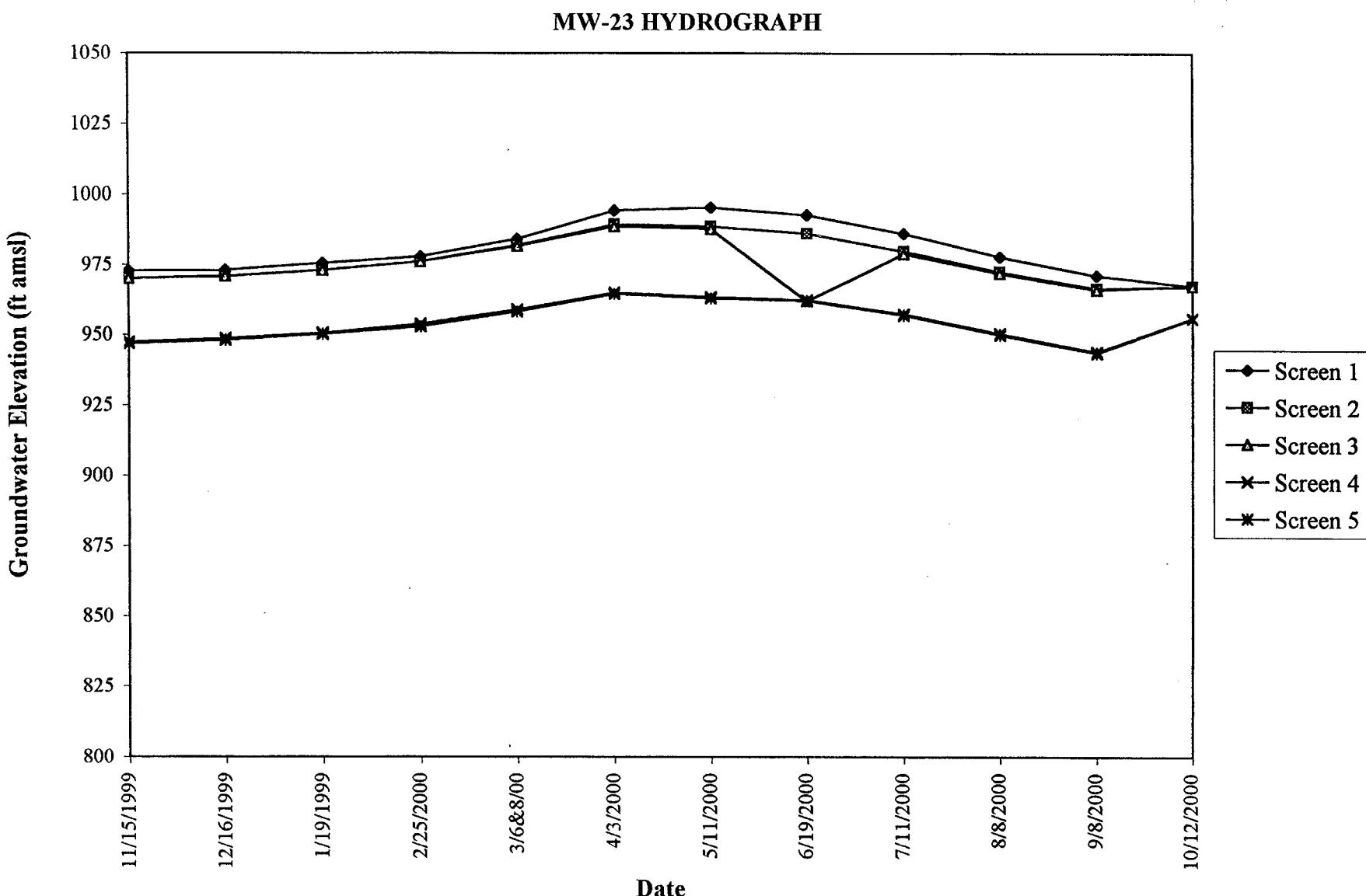


Figure 5-12

Annual Hydrograph for Deep,
Multi-Port Monitoring Well MW-23
(November 1999 - October 2000)

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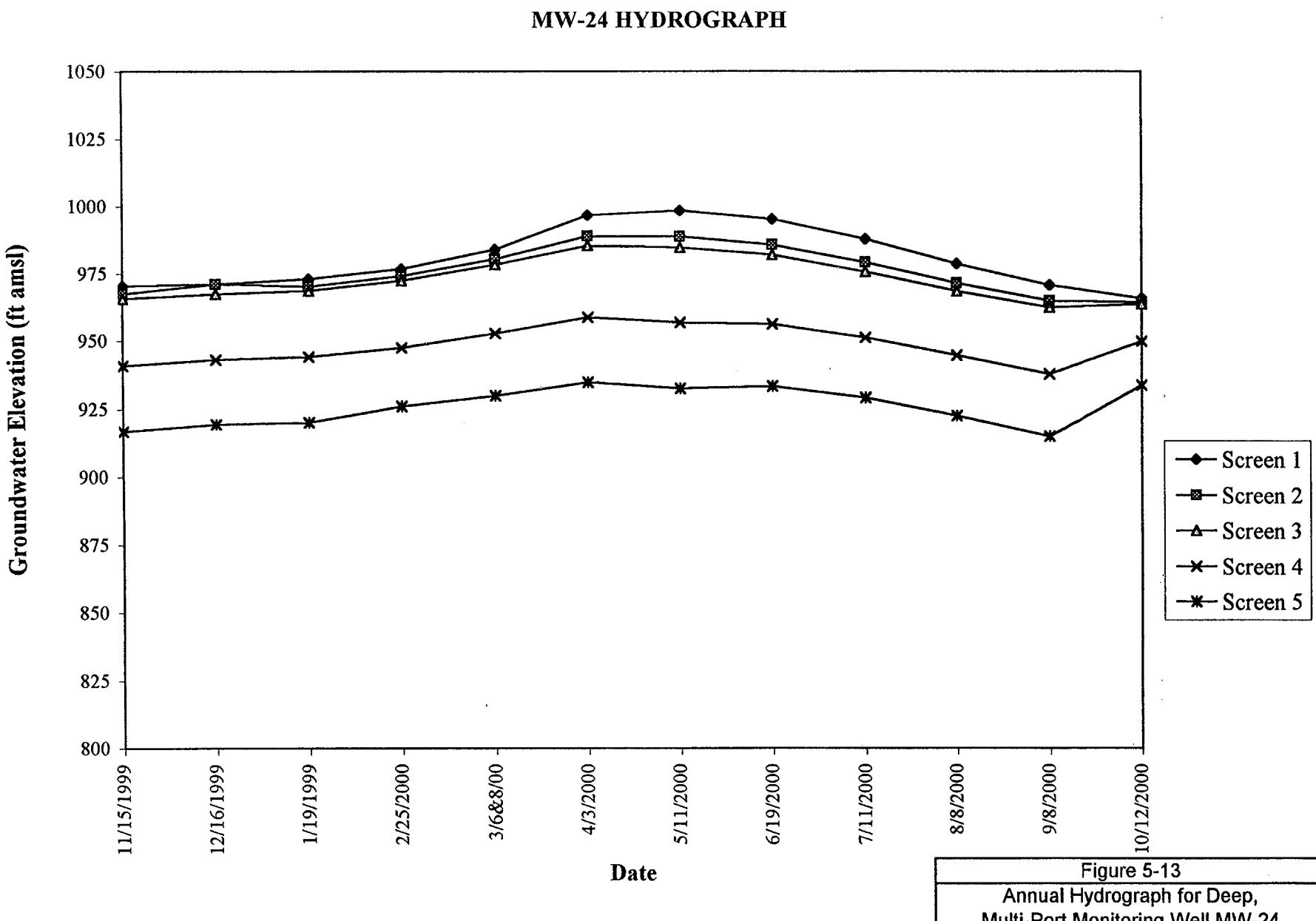


Figure 5-13

Annual Hydrograph for Deep,
Multi-Port Monitoring Well MW-24
(November 1999 - October 2000)
Jet Propulsion Laboratory

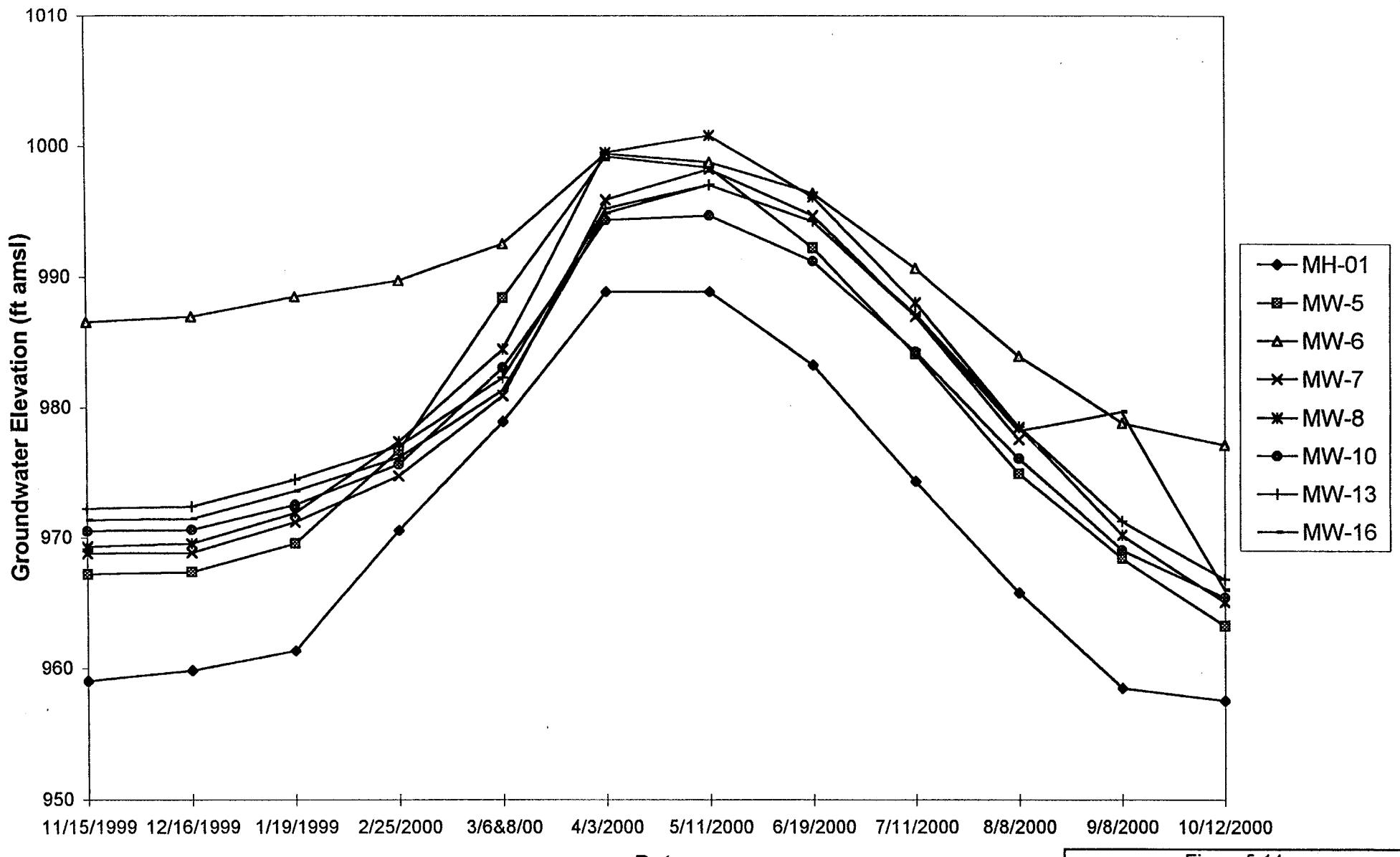


Figure 5-14
Annual Hydrograph for Shallow Monitoring Wells MH-01, MW-5, MW-6, MW-7, MW-8, MW-10, MW-13, and MW-16
(November 1999 - October 2000)
Jet Propulsion Laboratory

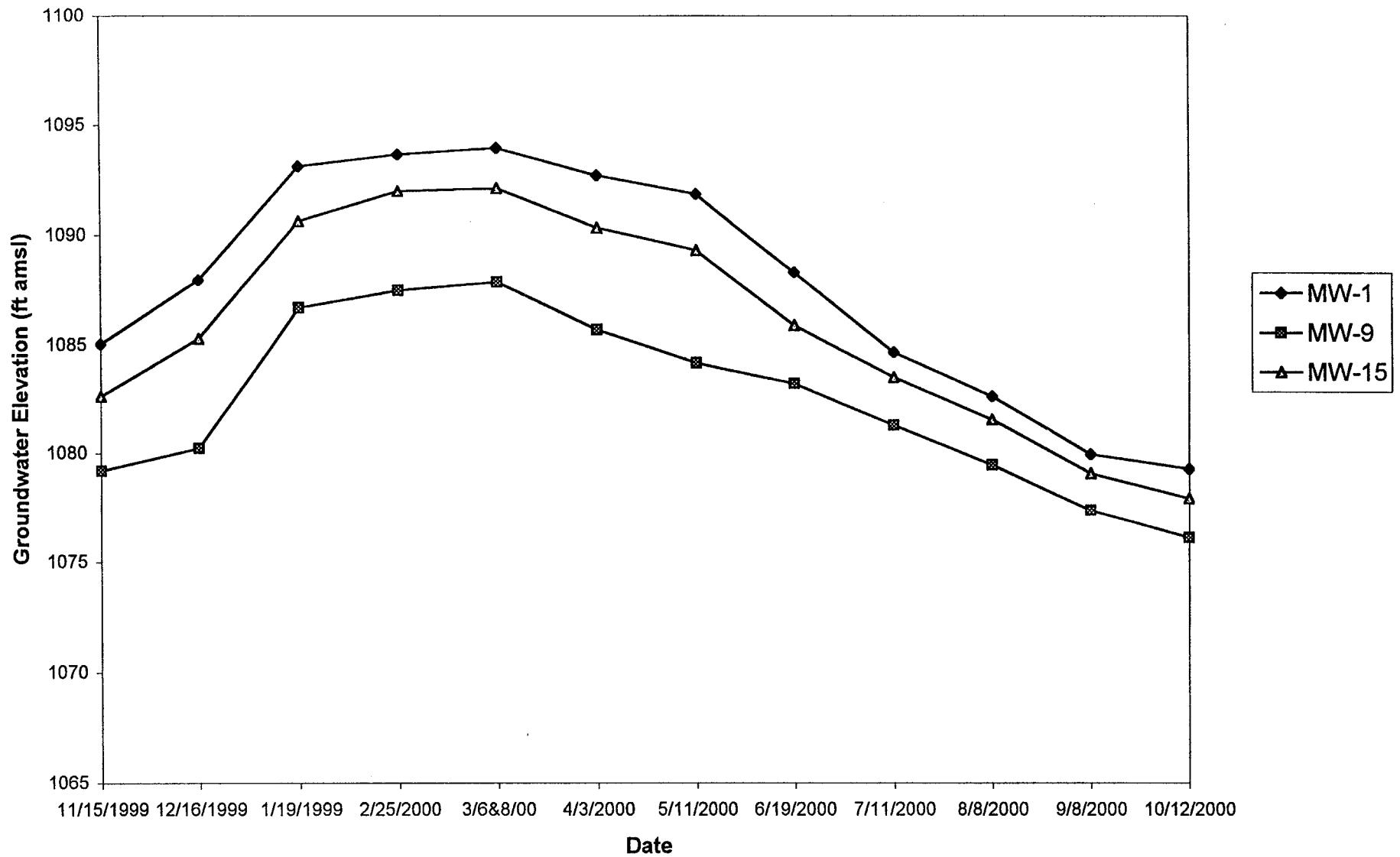


Figure 5-15
Annual Hydrograph for Shallow Monitoring Wells MW-1, MW-9 and MW-15
(November 1999 - October 2000)
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